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# East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS

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**ECONOMIC AND INDUSTRIAL AFFAIRS**

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INTERNATIONAL AFFAIRS

**REFORM PRACTICES OF POLAND, BLOC STATES, YUGOSLAVIA COMPARED**

Warsaw FINANSE in Polish No 10, Oct 84 pp 23-30

[Article by Franciszek Skalniak]

[Text] 1. Introduction

Although the systemic contents of all socialist countries resemble each other, there are essential differences in the methods of managing the economy.

The subject of the following analysis is the economic-financial systems of enterprises in Czechoslovakia, Yugoslavia, the GDR, Poland, and Hungary.

A common subject construction was adopted, within the framework of which the following system is introduced:

- a) phenomena specific for a given country,
- b) solutions common to some countries and divergent for other countries,
- c) solutions common to all or nearly all of the analyzed countries,
- d) generalizing remarks.

The problems of the taxation of enterprises have been omitted, because this question was discussed to a relatively broad degree in a study already published.

2. Systems of Management of the National Economy

a. The Yugoslav system is characterized by particular participation of economic selfmanagement and political selfmanagement, a system of representatives on all the rungs of economic and political activity, decentralization of management and neutrality of the budget of the state, republics, and districts in the financing of economic and noneconomic tasks.

b. Enterprises in Hungary, Yugoslavia and Poland have economic, organizational and legal independence. This has consequences for the possibility of the enterprise's adjusting the scope and independence of planning to suit its needs and the state's using economic tools without relying on commands and limits. In Czechoslovakia, on the other hand, where associations are operating, and in the GDR, where a combined structure of the economy is in force, the independence of an enterprise is limited, and as a

result enterprises are subject to rigors with regard to planning and to the use of direct tools of command.

One can trace a clear similarity on which the organization of the national economy is based in Czechoslovakia and the GDR, due to the maximum of centralization. Further places occupy Hungary, Poland and Yugoslavia, in this order.

c. The justification of the choice of the system of management, and in turn of the choice of the economic-financial system, stems from the specific features of the particular countries, in which psychological factors play a considerable role, for example, in the case of the GDR, neutralizing the negative effects usually brought on by the command system of management.

Most often, however, the system of management based on economic instruments shows itself to be superior to a system based on orders and prohibitions. This is attested to, among other things, by the negative judgement of the evolution in the practice of solutions in Poland, where despite usually separate opinions of economics, a system of commands and prohibitions dominated, which strengthened itself at the times of a particular lack of economic balance.

The long period of a successful realization of the economic reform in Hungary also speaks in favor of the superiority of the decentralized system of economy. This reform permitted a development of the economy and a maintenance of the market balance.

### 3. The financial Result of the Enterprise and Its Distribution

a. Only in Yugoslavia the income of an enterprise is accepted as the basic measure of the evaluation and the source of creating funds. The income of the enterprise signifies a surplus of the financial revenues of the enterprise over the material costs and amortization calculated according to rates generally binding as the minimum.

Only in Yugoslavia enterprises are entitled to add amortization up to the basic rates and to use the additional amortization for investment purposes within the framework of the first distribution of the income of the enterprise. It is an instrument similar to the accelerated amortization in western countries.

Only in Czechoslovakia the financial result is subject to correction by the amount of the increase or decline of production in process, semifinished products and finished products (in this way the amount of sales is also brought to the amount of the production). Also only in Czechoslovakia changeable, favorable or unfavorable results embedded in foreign trade have no influence on the financial results of the enterprise.

The specific Hungarian feature is the inclusion, since 1980, of the clearings due to losses and special profits into the framework of the enterprise's own costs.

The distribution of the income of the Yugoslav enterprise takes place in two stages. In the first stage the shaping of the net income and the covering of certain goals is realized. A specific feature, characteristic of Yugoslavia, is covering the needs of nonproductional activity from the income of the enterprises. "Selfgoverning Communities of Interests are convened, for certain nonproductional activities on the scale of the republic, for the purposes of health, education, higher education, culture and others. Delegates of both enterprises and of agencies of certain nonproductional activities will meet in these institutions. Funds derived from the income of enterprises are used to cover investment and turnover costs of the agencies of nonproductional activity." The specific feature of the distribution of the net income is the assignment of a fund for wages.<sup>2</sup> The remaining goals are similar to those of the other socialist countries.

b. The tendency to base domestic prices on world prices is the strongest in Hungary, then in Yugoslavia, and finally in Poland. This tendency is not encountered either in Czechoslovakia or in the GDR. In Hungary it concerns transaction prices in import and export, sale prices of basic raw materials and retail prices of consumer goods.

Examining prices from the point of view of their changeability or unchangability in time, one finds that prices are most constant in the GDR and less so in Czechoslovakia. In Hungary, Poland and Yugoslavia, on the other hand, they are characterized by large changeability in time.

From the point of view of the principle of the distribution of profit for funds of incentive nature, socialist countries can be grouped in the following way:

- 1) Poland and Hungary, which cover a part of the funds from the participation of the work force in the profit;
- 2) Czechoslovakia and the GDR, which create strictly defined funds from the profit--in Czechoslovakia the fund for cultural and social needs and the bonus fund, and in the GDR the bonus fund.

In Yugoslavia, Hungary and Poland there exists an indendence of the enterprise with regard to the distribution of the profit for the purposes of development and consumption, i.e., for the fund of development and the fund of the participation of the work force in the profit. In Czechoslovakia and the GDR, the distribution for these purposes is defined by the plan.

c. The typical distribution of the financial result in socialist countries takes into consideration the following purposes:

- 1) payment for the state budget,
- 2) reserve fund,
- 3) fund for development,
- 4) fund for the participation of the work force in the profit, or one of a similar character.

d) The financial result expressing the confrontation between the effects and outlays of the economic activity of enterprises is the basic financial category of the enterprise in all the analyzed countries. It constitutes the basic measure of the economic activity of the enterprise, the basis for creating funds stimulating the economic effectiveness and the source of financing the development of the enterprise. Additionally, on the level of the obtained financial results depends the size of the fund of social accumulation.

Although in all the socialist countries the profit of the enterprise--in the light of the principles in force--plays the superior role in economy of the enterprises, this role is diminished by the command system in planning and the limiting of the freedom of the enterprise in the exercising of control over production factors and the results of production.<sup>3</sup>

Independently of the noble systemic principles, the shaping of favorable financial results does not generate social trust, as it is currently happening in Poland. Increased profits are most frequently the result of the simple increase of prices, and often constitute a screen which covers the increase of costs caused by wastefulness, increase in the prices of raw and other materials, and the financial burdens imposed on enterprises by the state budget.

The worst remedy for these afflictions would be to diminish the role assigned to the financial result in the system. The indispensable condition for the financial result to play an important role indeed would be to increase the buying strength of money and to limit, and eventually liquidate, the distribution of goods and services in the enterprise economy.

The development of enterprises and the growth of the material interest of the work force in the financial results indirectly depends to a large extent on the position which the state budget plays in the national economy. Its ties with enterprises ought to aim at enlivening and stabilizing the development of enterprises, and it is impossible to achieve this goal if the state budget is oriented exclusively toward taxation.

#### 4. Incentive Systems in Economic Units

a. As it was stated in the previous point, the system of wages defines the Yugoslav enterprise alone as the factor of net income. The interdependence between the wages fund thus created and the size of the wages is obtained in Yugoslavia in a specific way, by a method of points. Each employee obtains for his work in the calculated period a certain number of points. This concerns not only piece rate employees, but also white collar employees and the management.<sup>4</sup> In order to obtain the sum amount of wages, the sum of the points for each employee must be multiplied by the value of the point, which in the given period is the same for the whole enterprise. The value of the point is the result of dividing the wages fund by the sum of points on the scale of the whole enterprise.

The incentive significance of the system of full participation of wages in the income of the enterprise eliminates the usefulness of applying other remuneration, in the form of bonuses or awards.<sup>5</sup>

The principles of determining and controlling the wages fund are most rigid in the GDR and most flexible in Yugoslavia.

The greatest stability of solutions, although based on opposing premises, is shown by the wage systems in the GDR and in Hungary.

The right to create the bonus fund and the fund for cultural and social needs in Czechoslovakia depends on the realization of several elements, which distinguishes this system from those which are in force in other countries.

Table 1

System of wages in Yugoslav enterprises

- I. The wage fund for the whole enterprise  
in the second phase of the distribution = the value of points  
of income ÷ the total number of points\* on the scale of the  
comprising the activity of all workers enterprise
- II. The number of points illustrating the the value = the wages of  
activities performed by particular workers x of a point particular  
on a scale employee
- III. The total sum of emoluments of individual workers = the wage fund on the  
enterprise scale (as in point 1)

A separate housing fund in the scale of the enterprise occurs only in the Polish economic-financial system.

b. In Yugoslavia and in Poland the size of the wages fund is established by enterprises independently and according to the financial results already obtained. The issue presents itself similarly in Hungary, with the difference that in Hungary are in force detailed norms of the size of wages tied to the economic efficiency. Enterprises which pay wages above the norms of payments or those established for a unit of employment are subject to heavy payments on behalf of the budget.<sup>6</sup>

Within the framework of the bonus funds and award funds, funds created from the distribution of the profit prevail over funds created into the debit of the own costs of enterprises. From the profit, funds are created in Hungary and in Poland, and the award fund in Czechoslovakia and the bonus fund in the GDR. On the other hand, in Czechoslovakia the bonus fund is created in the form of debit.

\* A point constitutes the unit of calculation of the activities performed by a worker.

Social funds, whatever their name, are created from the distribution of the profit in Hungary, Yugoslavia and Czechoslovakia, and in the form of complementary allowances in Poland. On the other hand, the basic allowance of the social fund in Poland and the cultural-social fund in the GDR are created in the debit of costs.

c. The limiting of the wage fund signifies waste of manpower and a lack of the possibility of economically justified mutual substitution between the factors of the live work and the object work, indispensable as a lever of the efficiency of management.

In the evolution of the system of the wage fund the principles of tying its size to the income of the enterprise in a direct way, as it is done in Yugoslavia, Hungary and in Poland within the framework of the so-called large economic organizations or in an indirect way, as currently in Poland within the framework of the system of the economic reform, have shown themselves to be progressive.

##### 5. The Financing of Enterprises

a. With regard to involving the state budget in the financing of investment, the most extreme solutions are seen. Namely, all "state" institutions in Hungary, i.e., investments about which the enterprise itself does not decide, are subject to financing from the state budget. On the other hand, in Yugoslavia the participation of the state budget in the financing of the production investments and basically also nonproduction investments is out of the question altogether.

A specific solution of the Hungarian system is the use of the form of budget loans in the financing of state investments. Currently, the state budget in Hungary provides funds exclusively in the form of loans which are subject to the repayment by enterprises, and financed by the Hungarian National Bank.

Only in Czechoslovakia coexist two funds for development purposes: the investment fund for financing central investments, and development fund for financing investments of outlays below 2 million crowns and for complementing the turnover fund.

Only in the GDR the so-called technical credit is currently used, i.e., credit for investment, paid for from the state budget.

Only in Czechoslovakia, direct relations take place between the raising or lowering of the interest rate of the bank credit, based on economic premises, in the sense of raising or lowering the amount of the bonus fund, and prior to 1980, the award fund.

The characteristic feature of the credit system in the GDR is a close following of the plan, both with regard to the structure of the assets and to the sources of their financing.

In the years preceding the economic reform in Poland, the system of giving credit for investments differed from the systems of giving credit in all the other socialist countries in the way that the credit for development investments constituted basically the exclusive and obligatory source of the financing of these investments.

The freedom of banks in determining the conditions of credit to enterprises is the greatest in Yugoslavia and the smallest, due to the limits of the plan, in the GDR.

Only in Yugoslavia the central bank applies instruments limiting for operational banks the credit expansion, analogically to those used in the capitalist economy, as establishing the minimum liquidity of banks, the limits in opening deposits, and the like.

The specific feature of the Czechoslovak system is the essential role of the index of the rotation of reserves generally without fuels, both in the planning and in the financing of the reserves. The second important feature is the detailed differentiation of turnover funds for the purpose of defining the appropriate sources of financing.

Only in the GDR a separate repair fund is created for the financing of repairs of the permanent funds of enterprises.

b. In Hungary, Yugoslavia and in Poland the sizes of investments of enterprises are shaped by enterprises independently, according to the needs and sizes of the enterprise's own financial means, and possibly complemented by bank credit paid from the enterprise's own funds, mainly from profit and amortization. On the other hand, in Czechoslovakia and the GDR, investment sizes are determined by limits, as in Czechoslovakia, or by the plan, as in the GDR, which basically means the same thing.

The characteristic feature of the financing of investments in Hungary and in Yugoslavia is the legal ratification of the possibilities for mutual credit giving by enterprises. Only in the countries where the independence of enterprises is subjected to limitations, due to their subordination to associations or combines, occurs a redistribution of the amortization and profit for investment purposes. This concerns mainly Czechoslovakia and the GDR.

According to the level of credit interest rates, we can rank countries in an order from the highest to the lowest level: Yugoslavia, Hungary, Poland, Czechoslovakia and the GDR.

c. In all socialist countries investments are divided into:

- ones about which the enterprise itself makes decisions,
- the ones about which decisions are made outside of the enterprise.

The principles of self-financing of enterprises are proclaimed by all the economic-financial systems with the exception of the GDR. This principle is

limited in Czechoslovakia due to the redistribution of financial means used there within an association.

In all the countries, bank credits constitute a source complementing the enterprises' own funds, but there are distinct features with regard to determining the scarcities either at the stage of planning or at the stage of the realization of the investment projects.

There are currently no uniform, generally obligatory indexes of the distribution of the enterprise's own funds in the financing of turnover means.

In Yugoslavia, Czechoslovakia, and recently also in Poland, turnover means of a permanent character are subject to long-term credit financing, and in Hungary to a middle-term credit. Only in the GDR--as it used to in the other countries before--a formally short-term credit to cover these reserves is obligatory.

In all the countries discussed, with the exception of the GDR, all repairs, including capital repairs, are subject to financing in the debit of the costs of the enterprise's activity.

In all the countries, with the exception of Yugoslavia, the fund of technological progress is created, which bears various names:

- the fund of technological development, in Czechoslovakia,
- the fund of science and technology, in the GDR,
- the fund of technological-economic progress, in Poland,
- the fund of technological progress, in Hungary.

d. Among the methods of the financing of the enterprise's activity, the bank credit plays an increasing role. Its incentive features are noted with the growing awareness of the necessity to increase the efficiency of management and the role of banks in this domain.

It turns out that bank credit is the most active instrument not when it is the only source of financing a certain activity, as it used to take place with crediting the development investments. Credit ought to be an authentic credit, i.e., a source complementing the enterprises' own funds, and not a source of financing obligatorily imposed upon enterprises.

By the nature of things, the credit is to be incorporated into the total of the enterprise's economic activity, giving a proper rhythm to the inter-dependencies between the financial and the material sides. It dominates over other methods of financing, particularly with regard to flexibility. The flexibility of the credit must not be considered the result of liberalism in making bank credit available in the economy. On the contrary, flexibility is a feature characteristic of credit relations, by the definition itself. This feature ought to be used rationally. The "shortage" of credit and money, and a realization of a wise credit policy, which cannot, however, be understood mechanically as a "policy of difficult money," is the condition of "health" in credit-money relations.

Banks are not irreplaceable in assuring an efficient course of crediting and in the accounting-cash service. As the technique improves, organizational and economic tools used in the bank apparatus in the realization of their functions change too. In the present conditions one can feel a particular need for the bank apparatus to perform the activities which would stimulate the efficiency of management of enterprises. It is a question which in none of the countries has worked out to the end. It is indisputable that the bank should not become a superior unit for enterprises, and in its policy it should not use automatically and generally certain patterns of the kind of the policy of difficult money. The bank always ought to be guided by common sense, and ought to base its decisions on thorough economic analyses, also with regard to forecasting.

## 6. Summary

From the brief survey of the common and divergent solutions we learn that solutions specific to particular countries, and solutions common to some countries, prevail. There rarely occur solutions common to the whole "five" of the compared socialist countries.

Usually one notices similarities on one side, between Poland and Hungary, and on the other between Czechoslovakia and the GDR. Yugoslavia usually has solutions specific to itself, although some consider it precisely close to Hungary and Poland.

Another thing is that in practice some economic moves in Poland are closer to the solutions which dominate in Czechoslovakia and in the GDR.

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## FOOTNOTES

1. F. Skalniak: "Problems of the financial result of enterprises in economic-financial systems in selected socialist countries," FINANSE, 1984, No 2, pp 35-36.
2. Ibid, p. 33.
3. The income of the enterprise plays this role in Yugoslavia.
4. Including workers employed in nonproductional activities.
5. Contracts regarding work and usually also author's royalties, which bear on the costs of the enterprise's activity, constitute an exception.
6. The payments on behalf of the State Vocational Activation Fund are similar in results, although simpler in construction.

GERMAN DEMOCRATIC REPUBLIC

#### GDR TRADE REPRESENTATIVE ON SINO-GDR ECONOMIC RELATIONS

Beijing GUOJI MAOYI [INTERTRADE] in Chinese No 9, 27 Sep 84 pp 17-18

[Article by Gunter Karrasch, GDR Commercial Counselor to China: "Hope Expressed for Expanded Trade and Economic Ties between GDR and China"]

[Excerpt] Trade relations between the Democratic Republic of Germany [GDR] and the People's Republic of China have developed steadily since the People's Republic was founded in October 1949. Our major exports to China are machine tools, complete plants and transportation equipment. We were particularly active in our cooperative relations with China during the 1950's when we supplied it with factory equipment and provided technical training.

China's traditional exports, which are highly valued in the GDR, comprise mainly native products, high-class consumer products, cigarettes, tea, wines and liquors, textiles, chemical products, nonferrous metals, and so on. Processed metallic industrial products are also becoming more and more important.

Sino-GDR cooperation has entered a new phase in recent years.

--Gunter Wyschofsky, minister of Chemical Industry, led a GDR delegation to China and concluded a series of scientific cooperation agreements.

--Zhu Rongji [2612 2827 1015], vice minister of the State Economic Commission of the PRC, visited the GDR at the head of a delegation of experts and reached agreement on 40 cooperation projects concerning China's technological transformation.

--A GDR delegation led by the minister of Heavy Machinery and Equipment, Rolf Kersten, visited China and signed a cooperation agreement with the Ministry of Machine-Building Industry.

--Numerous industrial and foreign trade experts from both nations have been visiting one another, opening up new territory in economic and trade relations.

Chen Muhua [7115 1970 5478], minister of Foreign Economic and Trade Relations of the People's Republic, visited the GDR on the eve of both countries' National Days. During the visit, we concluded an agreement on economic co-operation and a protocol setting up an economic, trade and technological cooperation committee.

Let us express again our sincere desire to develop economic and trade relations with China.

Finally, as the commercial counselor from the GDR, I would like to extend to all my Chinese counterparts my most sincere congratulations on the 35th anniversary of the birth of the People's Republic of China.

May the friendly cooperative relations between our two countries flourish!

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GERMAN DEMOCRATIC REPUBLIC

LEADING ECONOMISTS ON COMBINE MANAGEMENT, PRODUCTIVITY FACTORS

East Berlin WIRTSCHAFTSWISSENSCHAFT in German Vol 31 No 9, Sep 84 pp 1367-81

[Article by Rudolf Eilenberger: "Processes and Forms of Socialization of the Means of Production and Labor as well as Issues on Further Perfecting Administration, Planning and Stimulation of Economic Efforts in GDR Industry"]

[Text] In April 1984 a joint meeting on this topic was held by the Council for Issues of Economic Administration and the Council for Issues of the Political Economy of Socialism. Participating in this meeting, which took place at the Central Institute for Socialist Economic Policy at the Central Committee of the SED, were administrative scientists, political economists, and managerial staff from various combines and plants.

In his introductory remarks, Professor G. Schulz (Academy for Social Sciences at the Central Committee of the SED) described the main purpose of this meeting, which was to deal with the continued process of socialization as well as with a comprehensive intensification as the primary avenue to a general resource-conserving type of intensive expanded reproduction, above all in industrial combines and plants. He characterized the socialization of the means of production and labor as the overriding fundamental process underlying continued improvement of the conditions of socialist production within the GDR. Schulz pointed out that this process is taking place in accordance with concrete, historical conditions of reproduction, and by no means merely alongside laws determining social development. Continued socialization will rather follow the demands of the objective economic rules of socialism.

Even though the meeting was purposely limited in its scope to an examination of continued socialization in industrial plants and combines, the breadth and complexity of the entire process of socialization did not go overlooked. Thus Schulz pointed out that this process brings about far-reaching qualitative and quantitative changes in all phases and components of the reproduction process, in the economic relationships within and between the various levels and areas of the national economy, in the relationships between industrial reproduction processes and territorial development, as well as in socialist economic integration. All these changes reflect the dialectical reciprocity that exists between forces of production and conditions of socialist production.

The basic forms of the socialization of the means of production and labor are the social division of labor, specialization, cooperation and combination with simultaneous concentration, which, with socialist economic integration, are assuming new dimensions. They are a result of an increase in the forces of production and are at the same time a significant factor for their further development. They include certain economic conditions, such as the relationship between producers and collectives, and thus belong to the totality of the conditions of production. The development of the working population and the efficient utilization of the social work capacity are likewise inseparable components in the analysis of the process of socialization. Schulz also pointed out that the continued process of socialization involves complex solutions to fundamental economic tasks, that the social character of activity is intensifying even in the non-productive sectors and branches, and the economical utilization and preservation of the environment as well as the responsible management of natural resources are also components of the process of socialization.

Under discussion were theses that had been worked out by Professor H.-J. Braun (Central Institute for Socialist Economic Policy at the Central Committee of the SED), Dr E. Doerschel and Dr H.-J. Peters (both of the Academy of Social Sciences at the Central Committee of the SED). The following viewpoints of the constructive discussion will now be presented here.

First the discussants addressed themselves in their presentations to the qualitative new requirements of the transition to a general resource-conserving type of intensive expanded reproduction. The view was substantiated, based on these theses, that the forms of the socialization of the means of production and labor are to be brought into line with processes of renewal and their increasing impact on the plants and combines. By means of permanently innovative processes, a comprehensive and lasting intensification, especially with regard to increasing efficiency, can be brought about.

Second it became evident in the discussion that an effective socialization of the means of production includes all phases of the reproduction process, and that distribution, circulation, and consumption are by no means passive results of production. Thus, positive experiences in designing the cycle under the aspect of coping with innovative processes in relatively closed reproduction processes were shared. Connected with this were suggestions regarding the structure of the combines, the development and utilization of the social work-capacity, the development of consumer goods, and administration by means of base plants, taking into consideration the differentiated reproduction conditions in the combines.

Third the discussion took the form of a useful exchange of information regarding the successful implementation of the Decree of 1983 Concerning the Continued Perfecting of Administration, Planning, and Economic Efforts.

Fourth emphasis should finally be placed on the general agreement reached during this constructive exchange of opinion by members of both councils concerning the theoretical bases as well as the practical, in part very differentiated, problems of the topic of the day's discussion. Thus, for

example, despite the multifaceted complexity of the socialization of the means of production and labor, the definition of socialization which was offered in the theses and refined in the political-economic discussion was accepted (cf. Author Collective, "Economic Laws of Socialism: System, Particular Effects, Forms and Methods of Utilization." Dietz Verlag, Berlin 1981, p 117f.) It became clear during the course of this discussion that many aspects of the socialization process must be re-examined during the transition of the national economy of the GDR to intensively expanded reproduction. These include such questions as the processes of renewal and structural changes, guaranteeing stable economic growth in the face of altered conditions of reproduction, socialist economic integration, continuing the primary task in its unification of economic and social poli. and the economic dynamism which is linked to this.

In his introductory paper, worked out in collaboration with Braun, Doerschel addressed himself to selected questions. A crucial aspect of the continued socialization of the means of production and labor is the consciously-shaped dialectic between the forces of production and the socialist conditions of production in the face of comprehensive intensification, and therefore many questions have to be reconsidered from the point of view of the development of the combines and the altered conditions of reproduction. Doerschel stressed that the effectiveness of the expanding socialization of socialist production conditions must always be measured against the following three criteria:

First: the central effort must always be to reproduce the socialist production conditions as developmental and motional forms of the productive forces in such an expanded fashion that they impart effective impulses to the development of production conditions and allow this development to proceed in an unencumbered fashion. Today and in the future, this must be reflected above all in the renewal processes.

Second: efforts must be made to further strengthen the social link between the producers and to raise the comradely cooperation and mutual help between the workers and between working collectives to a level corresponding to the demands of comprehensive intensification.

Third: efforts must be made to encourage even more effectively the social activity of the workers via an effective functioning of the socialist democracy in production and to provide sustained support for efforts in the direction of outstanding performance and responsible participation in administration and planning.

If the transition to a comprehensive intensification is viewed as a revolutionary process, if its connection to the development of the combines is understood as a new stage in the planned socialist economy and the fundamental change in the paths, kind, and direction of the achievement of economic growth is stressed, then it is clear that in the socialization process, too, many qualitative questions must be asked anew. From this perspective Doerschel described four points of consideration.

The first point of consideration lay in stressing comrades' cooperation, mutual assistance, and increasing collectivization, measured socially, as a fundamental qualitative characteristic of conditions of socialist production. In the process of socialization, it is not merely a question of division of labor and cooperation, but rather their socialist functioning. Since socialization in socialism always implies a strengthening of the social interconnection between the producers, every step, practically speaking, must move in this direction.

The second point of consideration referred to the increasing significance of differentiated conditions of reproduction for enhanced performance, including the variations in the level of socialization between the branches and combines. In this regard Doerschel raised the question of how to determine performance goals and the complex evaluation of actual performances. The authors of the theses understand by the term "differentiated conditions" the specific performance sources and reserves for increased improvements in performance, and thus they decisively oppose an understanding of the concept which would derive the smallest possible claim for one's own work. It is primarily a question of reacting to differentiated conditions with differentiated tasks, as expressed, for example, in the obligations assigned to the combines during the meeting which took place in Leipzig in March 1984 of the Central Committee of the SED with the general directors of the combines and the party organizers of the Central Committee, and also in many different parts of the National Economic Plan of 1984.

The third point of consideration deals with questions regarding production criteria, which are linked to socialization, increasing efficiency, and thus to intensification. Larger production series should be aimed at in every case where conditions of production and sales volume would allow for this.

According to Doerschel, production criteria is based on two variables: production volume and one-time (prior) expenditures. The recognition that prior expenditures should be viewed as a variable is of practical significance in connection with the desired increases in flexibility and efficiency. Doerschel characterized the reduction in one-time expenditures as a result of progressing socialization, in particular in the scientific-technical realms, for which socialism offers in principle greater possibilities than does capitalism.

In the fourth point of consideration he turned to questions regarding the coordination of various interests and the continued creation, strengthening, and development of the merging of social, collective, and individual interests as the most important motivating force of socialism. The criteria which have been implemented for the perfecting of administration, planning and economic accounting form an all-important framework for this. The task lies now in establishing basic agreement regarding the impact of the various instruments and elements. Essentially this is a question of strong interest in economic progress and improved efficiency in the scientific and technical areas. It was stated that now was the time for this interest to become fully effective, from the combine plants and the work collectives down to the individual worker. A crucial factor in this regard is the comparison of efficiency within a particular combine. Increasing the motivation for improvements in efficiency

requires that each worker and each work collective is informed as clearly as possible about the size of the contribution to socialized work.

Professor W. Schliesser (Bruno Leuschner School of Economics, Berlin) spoke from the point of view of the socialization of the means of production and labor with reference to the development of socialist property. He emphasized that the analysis of the process of socialization from the point of view of property theory must be intensified, whereby more thorough attention must be paid to studies concerning the complicated inner structure of property at the means of production, the various degrees of socialization, the different forms of the process of socialization, of national property and of cooperative property, as well as the differentiated conditions of socialization. Furthermore, Schliesser pointed out that the process of socialization in distribution, circulation, and consumption must be more closely studied from the viewpoint of political economy. With reference to the manner in which distribution is handled, he recalled that "the manner of distribution depends, after all, largely on how much there is to distribute." (K. Marx/F. Engels, *WERKE*, Dietz Verlag, Berlin 1956 - 1968, Bd. 37, p 436.)

Along with advancing socialization, the mediating character of money, price, finance and credit increases in importance. The conscious and farsighted structuring of these categories in developed socialism must be studied more closely by political economists. With regard to circulation, further consideration should be given to bringing the processes of concentration and centralization in trade into even better harmony with national economic requirements of the economy of time and the optimization of transport expenditures, as well as with a demand-oriented production and provision of goods.

Professor R. Loos (Leipzig School of Trade) proposed suggestions for minimizing transport expenditures for an accelerated movement of goods. Professor H. Hentzschel (Karl Marx University, Leipzig) characterized the transition to administration of the combines by a base plant as resulting from qualitative progress in the process of socialization of the combines and at the same time as a decisive condition of its further planned structuring. He also called attention to the fact that production criterion must be viewed from the perspective of different levels (combine, combine plant, production shop), because they have their specific production criteria. He pointed out the following areas of progress in the process of socialization within the combines.

1. Concentration of the potential for research, development, and rationalization in independent economic and juridical units, so that essential processes that determine tempo and structure are centralized and profiled.
2. Formation and consolidation of a rational product-oriented administration, by means of the establishment of administrative areas, among other things, with corresponding profiled administrative plants, so that the reproduction process and the administration of the combines are more closely connected with each other.

3. Concentration and specialization of production, for reasons of economy, by means of the creation of a limited and manageable number of economically and juridically independent combine plants, accompanied by far-reaching profiling of products and production.
4. Continued refinement of conditions of socialist production by the expansion of collective relationships directed both at the economic ties between plant and combine and at the interests of the entire combine, via the formation of an economic accounting system for the entire combine.
5. The existence of experienced administrative cadres, with both political and specialized qualifications, who have acquired experience in direct, pragmatic administration by joining the processes of administration and performance, and who have access to a strategically-oriented conceptualization.

Professor R. Gertsch (Central Institut for Socialist Economic Policies at the Central Committee of the SED) addressed himself to the issue of the reciprocal relationship between the socialization process and economic organization. He characterized the further refinement or development of the relatively closed reproduction process as the decisive factor in a general increase in the potential for effectiveness of these fundamental economic units. In his view, this is the process which determines the continued socialization of the means of production and labor, and which at the same time is closely linked to essential developments in the realm of economic organization.

An essential result of the formation and perfecting of the organization of the relatively closed reproduction process is the development of an effective, rational foundation for economic organization, a foundation characterized above all by a profiling of the combine plants and plant departments, the development of organizational forms with the responsibility of centralised tasks and functions of the reproduction process, as well as by the creation of organizational forms of cooperation and coordination with the purpose of securing cohesion between phase-oriented and product-oriented management.

An economically-based relationship of large, medium, and small-sized plants is also a decisive factor in perfecting the economic organization of the combines. In this connection, Gertsch opposed the notion that small and medium-sized plants possess certain advantages of greater flexibility as compared with larger plants. He refuted the distinction between large and small-sized plants based on the idea that large-scale production is linked with large series and mass production, while small-scale production is linked to smaller quantities. Large-scale production is characterized by qualitative features and therefore cannot be evaluated strictly on the basis of the quantity of goods produced. Furthermore, mass production is also possible in small and medium-sized plants.

It is evident in this regard that the following questions must be studied more closely:

Analysis and elaboration of the qualitative factors involved in large-scale and small-scale production and of the implications of these for the socialization process and for economic organization;

Analysis of the factors influencing the designation of the concepts of large, medium and small-sized plants, taking into consideration specific conditions of reproduction and development;

Elaboration of the conditions and possibilities of an effective social and economic integration of small and medium-sized plants into the relatively closed reproduction process of the combines, paying special attention to accelerating the reproduction process and to increasing efficiency.

According to Professor G. Kuciak, (Bruno Leuschner School of Economics, Berlin), the thrust of the socialization process in the next few years will lie not so much in increased expansion, but rather in a clearer differentiation and the emergence of new qualities in the reproduction process in the combines and their plants. An essential aspect of this is the ability to react more rapidly to changes in demand. Speaking of the relationship between large, medium, and small-sized plants in a combine, he stressed that even within large-sized plants many possibilities exist for an effective linkage between large and small-scale production. These could be utilized for the purpose of increasing the ability to react, flexibility, and efficiency of the reproduction process. For example, in certain areas of the processing industry, smaller production shops are increasingly becoming the basis of a profitable production of small quantities of specialized products. By means of a corresponding profiling of suitable smaller production shops in large-sized plants in the direction of more frequent product change, it is possible to relieve the larger production shops of the plant of this necessity, thus guaranteeing them the relative stability in manufacturing conditions that is necessary for the efficient utilization of highly productive technology.

Professor P. Liehmann, Deputy Minister for Light Industry, took as his point of departure the assumption that, as large economic units with a relatively closed reproduction process, the combines are more than the sum of the previous plants. From this point of view, the network of interests within the combines should be studied. Finally, national economic interests should constantly be brought into line with interests of the combines, the plants, and above all with the interests of the work collectives, down to the individual interests of each individual worker. Base plants capable of performance are important for this process of achieving unity among the various interest groups.

Professor K. Groschoff (Academy for Social Sciences at the Central Committee of the SED) turned once again to the question of the network of various interests within the combines, where the goal is always the realization of economic, collective, and individual interests. For a base plant, which, like all plants, has to carry out decisions which have been made, the administration of the combine has a positive influence in this process of realizing various

interests during the fulfillment of a particular economic plan. Referring to the questions raised by Schliesser concerning the direct connection between increasing socialization and the development of socialized ownership of the means of production in both its forms, Groschoff noted that the relatively closed reproduction process in the various combines must be differentiated. Thus it would not be expedient to create research and development capacities in all dairy combines or in other food-producing combines as a component part of their reproduction process. Because of the similarity of the scientific and technical tasks that are to be solved, a centralized research facility has proven to be most effective, for example in the dairy industry, where such a facility works closely with all dairy combines. Professor O. Rennert (Leipzig School of Trade) referred to possible improvements in the degree of cooperation between district-managed combines of the food-processing industry, which represent different categories of socialist ownership, under the aspect of improving the utilization of existing economic and juridical frameworks.

Professor W. Opitz (Zwickau School of Engineering) concerned himself first with progressive experience based on many years in the administration of industrial plants and combines in the GDR, stressing the fact once again that each developmental stage in the economy is characterized by a corresponding form of administration, planning, and stimulation. In connection with a characteristic of specific conditions of reproduction in district-managed industry, he gave several examples of situations in which possibilities of intensification could be favorably utilized. This is expressed in relatively small expenditures for the realization of goals of mechanization and automation for the purpose of increasing the size of the work force. In a greater degree of disposability as a result of avoiding overspecialization, and in social advantages that result from the possibilities of assigning various plants to particular geographic areas. Opitz underscored the necessity of understanding the importance of taking into consideration differing conditions of reproduction when comparing performances.

Within the framework of CEMA, the economic effects of specialization and division of labor can be meaningfully linked to an improved mastery of the renewal processes and of more market-oriented product and selection design. Socialist economic integration has been for a long time much more than a "mutually advantageous economic relationship"; it is, rather, one of the decisive principles of social development in the GDR, and it must be dealt with in all of its diverse manifestations.

Dr. H.-J. Peters (Academy for Social Sciences at the Central Committee of the SED) discussed in his paper the close link between socialization and structural development, in particular the design of effective structures of production, underscoring the fact that the importance of this linkage is on the increase, particularly in the international arena. He emphasized that the linkage between socialization, structural development, and socialist economic integration is an issue central to the more effective utilization of economic integration processes for CEMA members. In his view, this raises a question of both theoretical and practical significance concerning the criteria and framework for the adaptability and compatibility of production structures in

CEMA countries, based on the socialization process and its international expansion. This framework consists of such aspects as:

- the level of scientific-technical achievement that has been reached with the structures, as compared with world levels;
- the historical, social, and natural conditions present and developing in each individual country;
- the quantitative and qualitative development of demand in view of the transition to comprehensive intensification in the countries of the socialist community;
- the foreign economic situation in each country.

With long-term goals of cooperation, with programs dealing with bilateral specialization and cooperation as well as with ever more effective agreement on economic policies, CEMA member countries had access to important aspects of a common economic strategy which enabled them to utilize international socialization processes through the large economic units in the CEMA countries, and has a direct effect on the formation of direct relationships between economic units in different countries.

Professor H. Fritsch (Friedrich Schiller University in Jena) discussed, from the point of view of the socialization process and its rapidly increasing significance for the full utilization of science as a productive force, experiences based on a series of studies of fundamental innovations in precision engineering and in precision optical equipment, especially in the VEB Combine Carl Zeiss Jena. He pointed out, for example, that in the development of the multispectral camera MKF 6, leading scientists, talented designers, technologists and engineers from industrial and academic research groups in the GDR were brought together under unified project management headed by the research center of the Carl Zeiss Jena Combine. He described renewal processes that require a problem-oriented synthesis of insights from a wide spectrum of scientific disciplines, including complicated technological symbioses and a coalescence between product and operational development. He lent support to the theses that hold that enhanced division of labor, specialization and scientific cooperation have a qualitatively new importance, because each qualitative source of growth can only be fully exploited by means of scientific and technical expertise. The more efficient handling of the division of labor, with corresponding areas of basic research, was described by Fritsch as a very important aspect of the orderly handling of fundamental renewal processes in the combines. He referred to the interrelatedness of the material and technical basis of research, development and production within the combines, between the combines, and between combines and research facilities as forms of the socialization process, referring by way of example to the creation of a technical school for lamination technology and special construction elements, in which facilities of the Friedrich Schiller University and the Academy of Science, as well as the VEB combines Carl Zeiss Jena and the Keramische Werke Hermsdorf are participating. This mutual cooperation on the part of combines and research facilities on the basis of economic agreements and contracts

supports the effective interrelatedness of the material and technical basis of science and production. In this, the process of concentration which has been achieved in participating combines has repercussions for the process of enhanced division of labor, which is carried out on the basis of national contracting and territorial cooperation.

Dr A. Seifert (Central Institute for Socialist Economic Policies at the Central Committee of the SED) concerned himself with the more effective utilization of scientific and technical knowledge in the development of capacities for product-specific supplying of the combines of the metalworking industry. In order to be able to estimate just what product-specific supplying means for major products of each individual combine, the influence of the most important deliverable parts and components on the quality and functionality of the main products must be analysed. The following considerations must be included in this analysis: In increasing measure, a process of integration of supplied parts into the final product is taking place. Some of these components are no longer simple manufactured parts which can be attached to the machine, but must rather be included in construction of the machine. (For example, sewing machines no longer are equipped with an external motor; rather, the housing of the machine encompasses both rotor and stator, and the wiring is replaced by printed circuits, thus making the wiring obsolete. In this way the motor becomes a component part of the machine.) Because of the rapidly increasing turnover of manufactured goods, it is necessary to exercise direct influence on the specific subcontracting. In many combines and plants, 25-30 percent of the product line must be retooled every year, despite the increasing complexity of the products themselves as well as of the technological processes involved in their manufacture. This places increased demands on the flexibility of production organization, which requires fast access to specific components. The subcontracting of specific components is becoming an ever-larger percentage of the value formation of the end product. Thus for a number of important end products, the percent of value represented by specific controls, drives, measuring devices, regulators etc, is rapidly increasing. Up to 50 percent of the value of hi-tech machines is determined by supplied components. All of these aspects taken together indicate qualitative changes in the structure of subcontracting. This requires adjusting the process of division of labor to meet these challenges, providing for a proportionality between end product and supplied components in accordance with rapidly changing market conditions.

The specific use of subcontracted components in the primary products of the combine and the increasing application of electronics to machines and installations require an increasingly unified approach to the development of mechanical engineering solutions and technical control equipment. These processes might necessitate the construction of a component capacity within the combine itself. Linked to this is the development of corresponding scientific-technical capacities for the on-site production of component parts.

Seifert pointed out that 10 to 20 percent of the scientific-technical potential is devoted to the scientific-technical development and supervision of the on-site production of specific components in the combines. In the collaboration with sub-contracting combines it has proven useful to work out long-term models for the joint solution of research and development tasks, in

which requirements can be set for the component industry based on the new and continued development of machines and appliances. Investments that are linked to the redesigning of plants for the production of product-specific components should be used in a concentrated way for reconstruction, with up to 40 percent of available funds being used in different combines for securing proportionality between the early and final stages of production.

A decisive factor in the development of on-site capacities for product-specific components, such as user-related circuit design and control devices, for specific transmissions, clutches and motors, is the securing of improved efficiency. Providing for the simultaneous development of specific components and end products is one of the factors contributing to this. Thus, for example, it was possible to shorten development times for spinning machines and flat-knitting machines in the Textima Combine by 12 to 18 months. An increase in the economic value of the products was achieved because the component parts had been tailored in on-site production to the specific functions of the end products, thus making possible the attainment of increased revenues and increased profitability in terms of foreign currency.

Dr M. Duesterwald (Karl Marx University, Leipzig) concerned himself with the acceleration of the economic circulatory system and the efficient design of the cycle science-technology-production-sales. The enforcing of complex innovations, integrated into the reproduction process of the combines, is proving to be a key question in continued socialization. In this there is a growing need to plan and carry out product, technical, and process development in a unified fashion--and as a unified efficiency potential--from the very outset, keeping in mind the need to take better advantage of resulting cross-sectional impact and structural effects in the reproduction process in the combines.

Professor L. Hummel (Central Institute for Socialist Economic Policies at the Central Committee of the SED) discussed timely questions concerning both the orderly economic linking of the social labor potential to the branch and territorial goals of economic development and new requirements for the efficient utilization and further development of human resources in the combines and plants. It is a matter of working out conceptualizations of the development and utilization of the social labor potential in all territories and branches and of securing the reproduction of the social labor potential, of consistently carrying forth the Schwedt Initiative for socialist rationalization, of working out goals for the economic development of strategies for securing the availability of labor, as well as of paying increased attention to the planning and execution of qualification measures. He supported the insight, based on the theses, that the importance of a high degree of availability of resources is increasing for the effective application of the social labor potential in connection with the realization of complex renewal processes, in order to enable appropriate reactions to changing requirements in the labor process. To do this, a corresponding willingness to learn, initiative, creativity, a healthy readiness to undertake risks and to cooperate on a personal level must be encouraged. An increase in availability of resources concerns each individual worker as well as the work collective. Hummel reported on positive experiences of ways in which combines and plants,

in organized cooperation with regional governmental agencies, were able to meet their serious responsibility for the efficient application of the social labor potential. In the case of production changes, of the introduction of new technologies, or of shift work, the new demands on availability are analyzed and the necessary qualification measures and social measures are decided upon. Every stage of the process is discussed and implemented together with the workers in question, with the unions playing a responsible and successful part. It is precisely in the systematic acquirement of labor for the resolution of new tasks in the work process that the advantages of the planned socialist economy become clearly evident.

Dr G. Knappe (Fritz Heckert Trade Union School) turned attention to the active role played by socialist competition in the socialization process. He referred, among other things, to competitive initiatives that are of importance to an increase in both scientific-technical and economic performance, and which simultaneously encourage and accelerate the socialization process. In the face of changing conditions in the carrying out of the economic plan, an important task of union and governmental administration is the reaching and surpassing of performance and efficiency goals with the aid of socialist competition.

Professor H. Luft (Academy for Social Sciences at the Central Committee of the SED) underscored the fact that continued socialization of production and labor by no means implies--as imperialist ideologists often claim--anonymity and loss of individuality, but rather on the contrary demands an increase in personal responsibility at every work place. This is a result both of increasing technical furbishing of the work places as a result of scientific-technical progress and of the increasing enhancement of the social division of labor, which leads to a growing differentiation and interdependency on the part of plants, combines, and branches. For this reason, there is an increase in the importance of the systematic organization of efficient cooperative relationships to an even greater extent, because this, as a factor in socialization, offers great opportunities for a significant increase in work productivity and efficiency.

The continued socialization of production and labor and the demand-oriented production of industrial consumer goods was also a central issue in the discussion. From the broad spectrum of various contributions to the discussion, a few aspects may be brought into closer perspective: the comprehensive intensification of production expands and alters, in a qualitative way, the possibilities of producing more new, efficient, user-oriented technical consumer goods, because of the transition to a generally resource-conserving type of intensive, expanded reproduction. The combines have access to many kinds of positive experiences in the interrelatedness of science-technology-production-sales. These advantages should also be carried through in the production of consumer goods. Science and technology play in this process an important role in the development of products and technologies. A rapid and permanent renewal in the production of consumer goods is an essential feature of the continued socialization of production and labor, and is also a factor in improving our ability to meet the public demand for goods. For the general readiness to excel in performance and for creative initiatives on the part of the workers, too, providing for

industrial goods of high quality and attractive appearance is an important factor in securing harmony between merchandise funds and purchasing power in line with the principle of material interest in greater performance. The continued development of the production of consumer goods in all of the combines requires a series of new considerations regarding the formation of an efficient division of labor from an economic perspective. In this regard repeated mention was made of the necessity of incorporating the production of consumer goods in a serious and regular fashion into the structure of the plants and combines which manufacture the means of production. This is a timely task for continued, systematic socialization.

**U. Weisspfug** (Academy for Social Sciences at the Central Committee of the SED) described the cooperation between the production of consumer goods and a capable research and development potential in the combines of district-managed industry, taking into consideration specific existing conditions of reproduction. The many different paths taken in the continued profiling of the production of consumer goods are as varied as these different conditions, and extend from the establishment of an on-site research potential via the establishment of long-term cooperation with scientific facilities and research centers at centrally-administered combines, to a merging of certain parts of the research and development potential at scientific-technical centers, which are subordinate to district councils, and others.

**Professor K. Bernheier** (Central Institute for Socialist Economic Administration at the Central Committee of the SED) pointed out that the advantages and far-reaching opportunities on the part of the combines to link science and production more closely should be enforced more rigorously in the future in the production of consumer goods. In his view, the increasing socialization in the area of the production of consumer goods is shown in the following decisive processes: In the combines which have traditionally manufactured consumer goods and which usually are fiscally responsible, the role and responsibility of science and technology for product and technological development is increasing. According to him, it is necessary to orient important tasks and to utilize this potential more intensively. If the combines that manufacture consumer goods can more effectively carry out their leadership role for the product group in question, in accordance with established guidelines, product renovation under the aspect of the solution of complex problems and forms across the various combines and industrial branches could be more efficiently implemented, and the activities of the combines which manufacture the means of production and of district-managed combines could be more meaningfully coordinated. A good part of the discussion was devoted to the important complex socialization-work on product groups-interaction between product groups, and further refinements in the production of consumer goods.

An interesting aspect of systematic socialization by means of the coordinated interaction of branch and territorial organizations was introduced into the discussion by Professor J. Becher (Fritz Mehring Institute of the Karl Marx University, Leipzig). He referred to the initial effects of intensification which occur even in the planning process in the case of procedures which have been jointly decided upon, stressing the authority of the coordinating discussions. In this he concerned himself with the task of establishing

agreement between social interests and interests of the branches and combines, in the development of infrastructure. Continued socialization necessitates increasing reliability in the social relationships between all levels of the economy, i.e. between the major areas, branches, combines, plants, and territories.

In his concluding remarks, Professor G. Friedrich (Central Institute for Socialist Economic Administration at the Central Committee of the SED) pointed out that the discussion had been both very stimulating and thematically as broad as the socialization process itself. It had brought forth constructive suggestions regarding further considerations of the problems linked to the socialization of production and labor in the combines. Friedrich paid particular attention to three problem areas:

First, he spoke on the shaping of the relatively closed reproduction process in the combine. This process is conclusively determined by such objective requirements as the need for a higher renewal rate for products, for a flexible reaction to customer preference and more differentiated user needs, the modernization and rationalization of base materials as a major direction in the reproduction of base funds, the development of a production and export structure which would permit greater refinement of domestic energy-carriers and raw materials, etc.

Under the influence of these requirements, the on-site construction of the means of rationalization in numerous combines from small production departments to independent special mechanical engineering plants within the framework of the combine has developed rationalization plants that represent an important link in the chain construction-technology-production of base materials, which have an increasing impact on the technical-economic level of production, and which play an essential part in the acceleration of scientific-technical progress in each respective combine. Both in the development of on-site construction of the means of rationalization (on the one hand, their relationship to the construction of processing materials and to maintenance capacities within the combine and, on the other, to the mechanical engineering plants outside of the combine) as well as in the on-site manufacture of level-determining components, in the use of the potential of combines which primarily manufacture the means of production for the development and production of highly valuable industrial consumer goods and others, it is evident that the posing of such traditional questions from the realm of political economy relative to the socialized process, such as the question of "horizontal or vertical concentration" or the notion that specialization and concentration of production must lead via an unbroken, direct process to an increase in production output must be re-examined. Relatively rapid changes in the structure of demand, accelerating scientific-technical progress in production, the necessity of allowing relatively high one-time expenditures, especially for science and technology, to be spread out economically over a wide range of products, also lead to a specific expansion of the production profile of the economic units, which is having a practical impact today on the development of combine structures.

Second, increased flexibility and the ability to react to changing demand structures and to the acceleration of scientific-technical progress pose new problems in the areas of production organization and cooperation. Thus, for example, in the face of a renewal rate of 30 percent and more, stability in the cooperative relationship, the willingness of the sub-contracting industry to participate in the technical development of the end producer, the ability to offer for their own part new solutions to the end producer, are all fundamental pre-conditions for industrial production. This raises questions of the interrelatedness of the national economy, the drawing up of the balance sheet, the securing of proportionality as well as of the style of direct collaboration between the various economic units, to an extent to which they had not previously been raised. Economically efficient solutions and effective economic measures require that in many cases the sub-contracting industry itself will be objectively placed in the position of having to tender bids.

The economically efficient reaction to continued differentiated user needs requires in many cases new organizational and also in part technologically constructive production solutions. Among other things, this is a matter of coupling individual production geared to the requirements of a particular customer with normal serial production. In actual practice, the following approaches are to some extent already being taken:

- development of capacities for special fabrication within a particular plant, in order to meet particular client needs, whereby the basic building groups are removed from the running serial production. The advantage consists in an increased ability to react without disturbing the running serial production;
- development of "variant workshops", in which serial products can be altered after manufacture to meet specific customer requirements.
- utilization of partial capacities in the construction of models, or of the construction of on-site means of rationalization in those cases in which customer-tailored specialized construction remains an exception, but which, because of its specifications, cannot be manufactured in the serial production of the plant.

With regard to the relationship between large, small and mid-scale plants Friedrich clearly established that no economic law exists according to which a large plant must be less capable of reacting and less flexible than a small or medium-sized plant. The degree of flexibility is determined much more by the specifications of the product, production processing, base material used, and by the principles of each particular production organization than by the actual size of the plant. In addition, in actual practice, the entire plant does not always have to react flexibly: often it is sufficient if adequate flexibility is present in individual plant areas, or in the independent small and medium-sized plants within a combine. The notion that conditions of reproduction in the 1980's will lead to a renaissance of small industrial plants is just as unrealistic as that "gigantomania" that assumes that plants will constantly expand in size. Large-sized plants are the backbone of socialist production.

Third, the further development and consolidation of the combines is inextricably linked to continued perfecting of administration, planning and economic accounting. The measures for the development of the administrative system, linked to the Resolution of February 1983, are aimed precisely at adapting administration, planning and economic accountability in all their complexity to the new stage of comprehensive intensification in production. In carrying out this resolution and the continued perfecting of administration, there are a series of practical and theoretical themes which continually arise precisely because of the advancing socialization of production and labor.

--In the discussion it was correctly brought out that the responsibility of the individual is increasing. At the same time, it is becoming increasingly difficult to measure personal performance. New ways and methods must therefore be sought in this regard. The socialization of production, in particular, is constantly presenting new questions with regard to the implementation of the socialist performance principle on all levels of economic administration.

--The question which was raised concerning the effects of economic organization on the relationship goods-money must receive further study. The correct establishment of agreement among the various interests is inseparably tied to the shaping of economic accountability.

--The decisive question is: how can we succeed in fostering the further unfolding of the advantages and motive forces of socialism, so that its inherent superiority over the capitalist mechanism of competition can become fully effective.

Turning attention to the international discussion, Friedrich took a decisive position against the one-sided opposition of administrative and economic methods. In his view, political-educational, administrative and economic methods should all be joined for full utilization of the advantages and motive forces of socialism. It is precisely the socialization of production which demands that political-educational influences be enhanced and that the administrative and economic impact on the work collectives be heightened, in order that the economic strategy of comprehensive socialist intensification can be fully realized.

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## GERMAN DEMOCRATIC REPUBLIC

## WORKER INITIATIVE: SUBJECTIVE FACTOR FOR HIGHER PRODUCTIVITY

East Berlin WIRTSCHAFTSWISSENSCHAFT in German Vol 32 No 10, Oct 84 pp 1441-57

[Article by Karl Hartmann, Prof Dr of Economics, Director of the scientific branch for Political Economy and Economics, Chairman of the Department for Industrial Economics at the CC SED party "Karl Marx" Academy; and Uwe Moeller, Dr of Economics, Deputy Director for Research and Publication in Political Economy and Economics at the same academy: "A New Stage in the Implementation of the Economic Strategy and New Requirements on the Efficiency of the Subjective Factor"]

[Text] Proceeding from the statements of Erich Honecker at the 7th SED Central Committee session, the article depicts the content of the new stage in the implementation of the economic strategy followed by the party for the 1980's. This content is perceived by the authors on the one hand in the simultaneous solution of two strategic tasks--the full-scale utilization of all possibilities of socialism in the interest of the people and the creation of the external conditions called for to this end--and, on the other, that intensive extended reproduction is taking on a comprehensive character in many respects: First, it determines all facets of the mode of production--the relations of production just as well as the productive forces. Second, it comprises all stages and fields of the reproduction process of national economy. Third, it is characterized by new ways and a higher rate of increase in labor productivity on the basis of the most advanced technology and products. The economizing of live labor is systematically connected with the growing economizing of embodied labor and, as far as the latter is concerned, not only with a growing economizing of operational outlays, but also of initial outlays. Finally, the authors derive consequences from these issues for the increasing specific weight of the subjective factor during the transition to comprehensive extended reproduction.

As Erich Honecker explained at the 7th SED Central Committee session and at the bezirk delegates conference in Berlin, another step, "a new stage in the implementation of the economic strategy," is ahead.<sup>1</sup> This new step toward

implementing the economic strategy is aimed at achieving higher efficiency through new technologies and new products.<sup>2</sup> This will make possible the successful pursuit of the main task course also in the future and, alongside the Soviet Union and the other fraternal socialist countries, solving two tasks of strategic importance simultaneously: The full-scale utilization of all possibilities of socialism in the interest of the people and the creation of the external conditions called for by ensuring their certainty."<sup>3</sup>

All experience has shown: Out of the political course of the main task arise the certitude about the future, the social optimism and the strength which keep deepening the relationship of trust between the party, the workers class and all the people. The proven main task course, the unity of economic and social policy, thus keeps proving more and more an inexhaustible source and strong impulse for the economic and social ascent of the country.

The 35 years of the birth and growth of the GDR have certainly demonstrated that our social ascent has always gone hand in hand with our economic ascent. Through the historic Eighth SED Congress resolutions on implementing the main task in its unity of economic and social policy improvements in the people's standard of living and the development of their personality became still more immediately the end and meaning of economic development. Thanks to this unified economic and social SED policy, aimed at the well-being of the people and their happiness, the people's social and material standard of living in the GDR has reached a level no capitalist country has to show for:

The greatest weight for the citizens' well-being attaches to the housing conditions. Since the Eighth SED Congress housing conditions in the GDR have fundamentally improved for circa 6 million people. The SED is resolutely holding on to its course of solving the housing problem as a social problem by 1990. In contrast, in the FRG homelessness keeps further increasing. This is not so because there would not be enough apartments, but because housing construction also falls under the profit law and rentals are rising to unaffordable heights. Whereas in the GDR today each citizen still pays the same rent--at equal dwelling space--per square meter as 35 years ago, for old buildings from 70 to 95 pfennige, for new buildings from M 0.80 to 1.25, in the FRG, with its so-called social housing program, DM 10 have to be paid, and more than DM 15 on the so-called free housing market. On the average a GDR family puts up less than 3 percent of the household budget for rent. In capitalist countries the rent devours at least 25 percent and often a far larger share still of the income of working families.

The people's material standard of living has risen by multiples, which among other things is clearly seen in the population's growth of net income. In 1970, that came to M 79.4 billion, in 1983, it came to the remarkable total of M 131.1 billion, in other words an increase of 1.65 times of what it had been. No inflation, higher rentals or higher taxes curtail the net income gains by the population in the GDR. In the FRG, on the other hand, the state and the monopolies year after year pull more money out of the pockets of the working people to raise the profits of the corporations and finance a still more profitable arms buildup. With only DM 5,000 in tax liabilities, each FRG family has to shell out for armaments today. In the GDR each family gets circa M 10,000 annually in monetary and free subsidies from the workers and farmers

state, which increase the family budget. The real income a worker's or employee's household could dispose of in 1982 came to M 2,282 on the average per month; M 789 of that came out of public funds.

Social security, comfort and a certitude about the future have risen to a qualitatively new height in the GDR. Since 1949, unemployment has become an alien concept for the GDR citizens. Whereas it is mounting at millions and growing year after year under capitalism, full employment in the GDR is among the real values of socialism. It is of the greatest political significance that the GDR, on the dividing line from imperialism, has succeeded, despite the transition by the most aggressive imperialist, mainly the U.S. circles to the confrontation course, and despite stringent world economic changes due to the capitalist crisis, in further improving the people's standard of living through increasing economic efficiency. This is attested to also by the most recent sociopolitical measures, the far reaching importance of which is put in bold relief against the background of social welfare cuts in the FRG: Whereas minimum pensions and other annuities go up next year in the GDR, the social condition of the pensioners in the FRG is further deteriorating--for the first time since there has been a legal pension insurance on German soil, pensioners in the FRG have had to pay health insurance premiums since 1983 (since 1 July this year 3 percent and, starting in July 1985, 5 percent of their annuity income). Whereas in the GDR the special subsidies for families with three children are raised and the benefits after the birth of the third child and any additional child and for married working mothers with three or more children further increase for taking care of sick children, especially the pay for time excused from work, go up from half a year to 18 months, in the FRG this year paid-for maternity leave has been reduced, in turn, by one month to a 3-month total; whereas in the GDR financial subsidies for families with three and more children are increasing, child-support money in the FRG has been drastically reduced for the second and any further child.

The people's high standard of living achieved is due to the solid performance growth of the GDR's socialist economy. Thus from 1970 to 1983/84 there came an increase of the produced national income to 179 percent, of the economic labor productivity to 172 percent, and of the net industrial product to 195 percent. This dynamic rise also continues through 1984, the 35th year since the founding of the GDR:<sup>5</sup> The produced national income, according to provisional statistical data, in the first 7 months surpassed that of the comparable period last year by 5.1 percent. Net production in the area of the industrial ministries rose by 8.2 percent, labor productivity, by 7.4 percent. Six percent more finished products for the population were made available, and on that basis the retail sales grew by 4.9 percent. By the end of July 117,141 apartments had been newly built or modernized, through which up to that point of time in the anniversary year of the GDR 350,000 citizens found their living conditions improved.

This successful social and economic development is based above all on an ever better utilization of the advantages and impulses of the socialist planned economy. That finds its expression in the  
--gradual implementation in the all-round intensive extended reproduction based on an increasing acceleration of scientific and technological progress;  
--qualitative growth of the working people's creative initiative in socialist competition, their performance dedication and creativeness--expressive of the

effectiveness of the political course of the main task, aimed at the unity of economic and social progress, which through daily experience strengthens the working people in their awareness for that good work pays off for the individual and that solid labor results are a crucial contribution to supporting SED policy aimed as it is at the well-being of the people and the safeguarding of peace; and --altogether high level of the methods and instruments of socialist economic management--which relates to the SED's greater role and ability politically to lead economic processes even under complicated external conditions and to the improvement in the management, planning and economic cost accounting in accordance with the requirements for comprehensive production intensification, where the main trend is the further deepening of democratic centralism. The measures introduced in accordance with party resolutions help greatly in focusing combine and enterprise interests more on social requirements and bringing to realization the principle: "Whatever is useful to the economy must also be of advantage to the combines, collectives and working people."

This higher level in the utilization of the advantages and impulses of the socialist planned economy also forms the solid foundation toward taking another step in implementing the party's economic strategy. Party resolutions and documents have elaborated its essence, distinctive marks and criteria: The main thing is to lend a comprehensive and permanent character to the intensification of the economic reproduction process.

Proceeding from the insights of Marx, Engels and Lenin, the SED--especially since its eighth party congress--has shown this intensive extended reproduction to be the type of reproduction that conforms to developed socialism. Production intensification alone makes possible maintaining high economic production growth permanently, which is indispensable for satisfying the people's growing needs, for a higher qualitative development of the material-technical base and for the defense of peace.

The party's economic strategy decided on at the 10th SED Congress logically focused on enforcing the intensive extended reproduction in the GDR economy. Great successes have come this way. Between 1980 and 1983 (counting the 1980 figures as 100 percent)<sup>6</sup> the produced national income rose by 112.3 percent, economic labor productivity by 111 percent, and production consumption by 103.9 percent, it thus climbing far more slowly than the produced national income and the labor productivity.

That is a solid foundation for lending intensification a comprehensive and permanent character in the new step now to be accomplished. As practical experience shows, this involves mainly the following:

First: Intensification determines all sides of the mode of production--the production relations as well as the productive forces--and their interrelations, which mainly proceed by way of the socialization process. The planned implementation of intensification is one of those revolutionary processes which--as the SED Program states--is tied to penetrating economic, social, material-technical, political and intellectual-cultural changes in the GDR's socialist society. In this process the conditions under which the economic laws work and their requirements are being changed and the socialist production relations are thus improved according to plan.

Proceeding from the Marxist-Leninist reproduction theory, the conclusion arrived at then is that in the transition to comprehensive intensification new requirements are generated for the law of conformity between the production relations and the character and level of the productive forces. A concrete expression of it is the better use made of the advantages and impulses of the socialist economic system, that is mainly of the socialist production relations, for tapping the efficiency potential of the scientific and technological revolution. A key issue for it lies in deepening the socialization process, particularly a close linkage between science and production. This linkage has assumed a new quality in the combines. Especially the organic linkage among all reproduction phases, from research to sales, facilitates a high degree of upgrading in technologies and products. That is a key issue in the new stage of implementing the economic strategy: What matters is to produce far more speedily more new products and technologies at international top standards and make them productive and effective at a broad range.

An important economic experience is that mainly through a high degree of upgrading in technologies and products science becomes an immediate productive force. A high degree of upgrading is the decisive way for faster producing an efficient production and export profile oriented to market requirements, increasing labor productivity while the expenditures for specific resources drop, and thus lending a comprehensive and permanent character to socialist production intensification.

Of course, with the modern productive forces the socialist production relations and the superstructure must also develop further. The SED always regards the reproduction process as a unity of the reproduction of the objective production conditions, human labor and the socialist production relations. That is to say, in the implementation of the intensive extended reproduction it has always been important to improve the production relations according to plan in such a way that they can with high efficiency fulfil their function as an impulse of the modern productive forces.

In some way the whole dialectic of productive forces, production relations and superstructure acquires a new quality. For one thing it consists of a much higher degree of mutual influence, dependence and interaction, from which it follows, on the other hand, that improving the socialist production and superstructure relations becomes much more important for developing the productive forces than heretofore.

This concerns the formation and consolidation of industrial and construction combines, the deepening of agricultural cooperation, the closer cooperation between basic research institutes and production, territorial rationalization, cooperation extending beyond combines and branches in implementing state contracts, the deepening of socialist economic integration and the perfecting of management, planning and economic cost accounting, and other processes.

Part of the superstructure--and not last--are the consciousness processes. All experience shows that for a comprehensive and permanent character of intensification mainly the working people's consciousness, their work attitude and labor discipline, their innovator spirit and creativeness are decisive. For that

reason, if not only for that one, it makes sense to infer that the weight and role of the subjective factor vastly increase in the new stage of the implementation of the economic strategy.

Second: Intensification embraces all phases of the economic reproduction process and all sectors of the economy. We have already pointed out the intensification of the linkage between research, production and sales with reference to the combines. Intensification captures not only production but sales and research and their interactions as well. An important trend of the intensification of R&D processes that is rapidly gaining in importance, for instance, are the computerized jobs. Through using computerized jobs in R&D and technologies one main trend is already indicated through which we are able to raise the efficacy of the subjective factor still more. Such working tools make possible a much broader spread of human creativity in this important sphere of the social reproduction process.

Altogether practice unequivocally shows the party concept is correct. With the combines economic units have indeed been generated that can ensure, essentially out of internal sources, an all-round intensive extended reproduction and, hence, high flexibility. That is at the same time an essential aspect of the qualitative perfection of socialist property relations. The deepening of cooperation relations in agriculture, aimed at increasing the internal cohesiveness of the streamlined agricultural reproduction process, works in the same direction.

Comprehensive intensification furthermore means that it is enforced in construction, agriculture, transport and communications, and in commerce as much as in industry. The GDR has succeeded in going into labor and resource-saving production growth in the main sectors of material production. As already pointed out, in the 1980's the national income in the GDR economy rose faster than production consumption. (See the following table.)

Table: Development of the Net Product and of Production Consumption in the Sectors of Material Production in the GDR from 1981 to 1983 (1981=100)

	Net Product	Production Consumption
Industry	109.0	101.0
Construction	105.5	96.3
Agriculture and Forestry	100.9	96.5
Transport, Post and Telecommunications	107.6	96.5
Domestic Trade	102.3	98.0
Total Economy	107.1	100.7

("Statistisches Taschenbuch der DDR 1984" Staatsverlag der DDR, Berlin, pp 15, 28-29)

The positive tendencies also apply to agriculture. In Erich Honecker's remarks at the 7th SED Central Committee session one finds the statement: "One may say that in agriculture also in 1981 and 1982 a certain stretch of the road was passed toward improving the cost/benefit ratio."<sup>7</sup>

If one looks under such aspects on the results achieved in the last 3 years, one finds how justified we are in speaking of an economic process of change in socialist agriculture.<sup>8</sup> The net product from 1981 to 1983, as compared with the period from 1976 to 1978, rose by 8.8 percent, that is to say, at an annual average of M 1.3 billion, and thereby for the first time faster than the gross product, which climbed by 7.3 percent. This positive balance was achieved through reduced fund allocations. In the period referred to, compared with the first 3 years of the previous five-year plan, 11.2 percent less nitrogen fertilizer and 21.2 percent less phosphate fertilizer were used. In a comparison between 1983 and 1980, 53.6 percent in carburetor fuel, 15.6 percent in diesel fuel, and 61.2 percent in heating oil were saved.<sup>9</sup>

That essentially achieved a turn in the dynamics between costs and benefits. These results give evidence to the reality of the ambitious objectives also to achieve in agriculture an increased output while specific and material production consumption figures are dropping absolutely.

The fact that all sectors of the economy are going into comprehensive intensification is extremely significant. That way only can one make sure that the economizing effects attained through intensification in one sector are not offset through extra expenditures in other sectors. Ultimately this requires us to proceed in all sectors toward an accelerated, broad and effective utilization of the latest science and technological data. Simultaneously, the intensity of relations among economic sectors, their linkage within the social reproduction process, vastly increases. Socialism knows of no socioeconomic barriers to this socialization process. Its advances essentially depend on the people, on their attitude, not only to their own enterprise, combine, LPG or economic sector, but to the economy as a whole. Parochialism would only hurt it. The interests of all working people and of all of society are objectively identical in socialism. Materially shoring up this identity in an always better way and making all working people and their collectives as well as the leaders of the collectives always again aware of it calls for purposeful political-ideological work by the party organizations. Also then from the vantage point of the intensification of all phases and sectors of the social reproduction process, it turns out that the subjective factor keeps growing in importance.

Third: Comprehensive intensification is marked by the comprehensive utilization of all intensification factors, all sources and ways of intensive extended reproduction. In particular, it becomes possible and necessary to raise the labor productivity and efficiency levels faster now and in the future than heretofore. It turns out that, with the advance in the productive forces and production relations, qualitatively new requirements arise for enforcing the laws of time economy and of steadily increasing labor productivity. One chief criterion of it is that the economy of live labor is organically linked with increasingly economizing embodied labor--and this not only for the running but also for the one-time outlays.

The new requirements for these economic laws of socialism in the current phase of social development have been theoretically generalized and made effective in practice by the SED with the criteria it established for comprehensive intensification:<sup>10</sup>

--Production must also grow in the future at reduced energy, raw material and semifabricate consumption in absolute figures.

--There must be a higher rate of increase in labor productivity. And labor productivity must be increased faster than basic assets allocations.

--The economic results coming out of science and technology, especially in export, must increase faster than R&D expenditures and, altogether, the scientific-technological work connected with it.

--Improving the cost/benefit ratio is important for all branches and sectors.

In line with these measures and criteria for comprehensive intensification, what matters is that the specific energy, raw materials and semifabrics consumption drops faster than production grows. What matters is to organize a noticeable economic rationalization thrust that leads to a higher basic assets efficacy, to gaining manpower for more productive activities and also in the non-producing sector and to significant relief of the material balances. We aim at completely enforcing a labor and resources-saving reproduction type that creates the material bases for social policy and also is the most effective form for reproducing the natural environment.

The criteria for comprehensive intensification indicate that the factors, sources and ways to bring economic total expenditures down per use-value unit, and hence also the increased labor productivity and efficiency, show greater diversification and complexity.

Essentially, this amounts to coping with two tendencies that are characteristic of comprehensive intensification:

i. The dynamically continuing growing economy of live labor--expressed mainly by the growth of the labor productivity parameter--is combined with an economy of embodied labor growing faster than in previous periods. That gives rise to additional and new impulses for increasing labor productivity throughout.

To Marx, increasing labor productivity ultimately means reducing total expenditures per use-value unit produced.<sup>11</sup> Total expenditures--insofar as one relates them to running expenditures--are made up of the consumption of live and embodied labor. To assess labor productivity precisely one is thus interested in the development of the economy of live and embodied labor. The economizing of live labor has constantly increased in the GDR economy. Since the year in which the GDR was founded it rose (till 1983)--in terms of the parameter for the produced national income per worker in the producing sectors--<sup>12</sup> by 987.6 percent, that is to circa 10 times of what it was at the start of the GDR's 35 years.

At the same time, until 1978, production consumption as such climbed faster in the GDR than did the national income. That was caused by various objective factors, which we are not commenting on in particular at this point. An overriding factor, however, no doubt was the prevailing type of reproduction which--for reasons of objective and specific factors, such as the status of scientific and technological progress, the GDR's raw material situation, overcoming the disproportions the split had caused, and the debugging of the economy--contained more or less strong extensive tendencies. While the produced national income rose to 637 percent till 1980, production consumption came to 732 percent (both in material terms).

Till 1978 thus the boost in labor productivity in the GDR economy was typified by the manner Marx had pointed out: "Increasing labor productivity simply is that the proportion of live labor is reduced but that of the one before is increased, but in such a way that the total labor invested in the goods diminishes; so that the live labor diminishes by more than the one before increases."<sup>13</sup> In the transition to comprehensive intensification, however, even the labor spent before diminishes per use-value unit. And precisely in that are found to a significant degree the new sources for a much faster rise of the labor productivity level.

The key issue here is a new step in tapping the efficiency potentials of the scientific and technological revolution: "All experiences indicate that in the course of the current scientific and technological revolution reserves for boosting labor productivity are found to a degree inconceivable up to now."<sup>14</sup>

The already referred to turn in tendency that has occurred in the growth proportions between national income and production consumption proves how much success the workers class, cooperative farmers, scientists, technicians and all working people in the GDR, under party leadership, have already achieved in coping with the scientific and technological revolution. And here once again, what is crucial for it we find to be this: On how well the party organizations' good leadership activity and prudent management activity succeed in galvanizing the people for lofty economic aims ultimately also depend the prospects for a successful utilization of the efficiency sources of the scientific and technological innovator processes. Smugness, conservatism and mediocrity are incompatible with the requirements of the scientific and technological revolution. Which then also means that the developmental tendencies in production consumption are not just questions of, say, material consumption, they also signal the whole political-ideological and moral climate in the production collectives.

## 2. Economizing the running expenditures must be linked more with the economizing in one-time expenditures.

The task of going into comprehensive intensification in the new stage of the implementation of the economic strategy implies the requirement to achieve a positive development for all facets of the basic assets efficiency--as an essential aspect for economizing one-time outlays--and especially also for the basic assets quota.

A growing basic assets quota would tap additional sources for boosting the labor productivity. That relates, first of all, to such effects that would produce more products per unit of basic assets, and the write-off would drop per use-value unit, and the same would apply to overhead costs and other relatively constant costs. All these would exercise an additional impulse on boosting labor productivity and, with it, release investments in relative and absolute terms.

Raising the basic assets efficiency throughout ultimately presupposes labor productivity boosts in the manufacture of the working tools. That is why the SED in its resolutions so emphatically focuses on faster increasing the efficiency of machinery, installations and equipment than what it costs to manufacture them

while providing for full-scale shift operations in the enterprises and modernizing the extant plants. The main way to get there lies in pushing the development of machine building, the combines' means of rationalization construction and the modernization of entire technological production complexes. A main question is a longer working life for installations through maintenance, modernization and reconstruction.

And so it also applies here that the basic prerequisites for improving the basic assets efficiency, especially the basic assets quota, have to be created right at the drawing-board. Yet there, as much as in putting new working tools into production and, eventually, in using them, man will decide what performance parameters the machines, installations and equipment have and how they can be utilized, even perhaps improved, in increasing production with a better cost/benefit ratio. The performance parameter of the machines and installations, full-scale shift operations, the observance of technological instructions and, not last, the servicing and maintenance of installations--all this directly relates to man, to his attitude about work and his work itself, which means, to the subjective factor.

The subjective factor is a multifaceted phenomenon. Above all, the subjective factor in socialism is the revolutionary activity of the workers class and all working people under the leadership by their Marxist-Leninist party.

Practice has confirmed the experience generalized in the SED Program, that each further step within the historic process of penetrating changes in the further shaping of the developed socialist society is inevitably tied up with the further growth of the subjective factor, especially with the leadership role of the workers class and its Marxist-Leninist party. It is not by chance that these general inevitabilities are becoming especially important right now. There are objective causes for that, among which are:

First: The dialectic between the objective and subjective factors working behind the economic laws of socialism is qualitatively being deepened. As one knows, the subjective factor assumes a different position, from the outset, within the functioning of the economic laws of socialism than in all previous pre-socialist modes of production: the working people's socially conscious activity is an objective, inherent necessity for implementing the requirements of the economic laws of socialism. In contrast to all pre-socialist modes of production, the economic laws no longer act spontaneously. Rather, they need the scientific leadership activity of the Marxist-Leninist party, the conscious action of each.

These interconnections become much more important under the conditions of comprehensive intensification in the new stage of implementing the party's economic strategy. That results from the growing role of man, especially of the workers class and all working people, in the further social advances under the conditions of the scientific and technological revolution. In its alliance with the co-operative farmers and the scientific-technological intelligentsia, the workers class is the chief social supporter of the scientific and technological revolution. And that is not all it is. In alliance with all working classes and strata, it also is, and mainly so, the class that exercises the power.

Precisely because the workers class, in alliance with all working people, sustains the political power and with it, as the main productive force, sustains the scientific and technological revolution, the dialectical unity between subjective and objective factors in the working of the economic laws of socialism is deepening so that they much more strongly pervade the new stage of the implementation of the economic strategy.

The main trait, it thus turns out, is that the role of the workers class and of all working people increases in socialism in several mutually conditioned directions: as the main productive force, as the one that exercises the political power and, connected with both, as the subject of the process of history. Impulses arise from this identity for social, especially economic, progress that are unknown in capitalism. On their active utilization largely depends how now and in the future the efficacy of live labor is heightened and how labor productivity eventually reaches a level unattainable to capitalism.

In the industrially developed capitalist states, naturally, intensive forms of reproduction are also prevailing. Therein lies a general inevitability of the productive forces. Only that there the process is highly contradictory. As one can see, there all the contradictions of the capitalist reproduction process are deepening.

That concerns, among other things, the vast deterioration of capital utilization conditions, mainly because of its excess accumulation, and the exacerbation of the market and realization problem. Most drastic has been the sharpening contradiction between the planned organization of production within the corporations or monopolies, on the one side, and the growing anarchy within the capitalist economies and, above and beyond that, in the entire capitalist world economy, on the other. The deepening of this contradiction can, among other things, be glimpsed from the following: while the monopolies are starting one rationalization wave after another, in the outcome of which their labor productivity grows and a resources-saving type of growth, especially in the growth of profits, is being enforced, growth on the economic level is stagnating more and more, over long periods they can no longer even ensure the simple reproduction of the country's productive forces, especially of man as the main productive force, and production capacities lie fallow massively. As the hosts of millions of unemployed show--there are almost 3 million of them, as one knows, in the FRG--imperialism is, primarily, unable to develop the main productive force of society, man.

Against that background in contemporary capitalism the contradiction has become especially sharp between the workers class and monopoly capital, between the main productive force of society and the owners of society's decisive means of production. That contradiction can be resolved only through a change of the political power relations and the enforcing of socialist property relations.

This in part also answers the question on which qualitatively different impulses, belonging to a higher socioeconomic order, socialism can rely in its class conflict with the capitalist system which, as one knows, also has strong impulses for boosting its labor productivity, however inhumane and inhuman they may be.

The superior socialist impulses do not prevail automatically, of course. Even the comprehensive use of the impulses derived from the identity between the main productive force and those who exercise the power in socialism must be released through energy and planning.

That gives rise to far-reaching conclusions with regard to lending skill to the party organizations' political leadership activity. That applies in particular to promoting the democratic activities of the working people in the combines, enterprises, LPG's, VEG's and their cooperative facilities. In this, the democratic participation by the workers, cooperative farmers and all working people obviously must relate more and more to the planning, management and implementation of scientific and technological innovator processes. That is the place, after all, where the decisions are made about a continuing qualitative strengthening of the workers class, of the class of the cooperative farmers and of the socialist intelligentsia, and about bringing about scientific and technological top achievements as a basic condition for the further economic strengthening of the GDR.

The developmental processes of the productive forces in the scientific and technological revolution facilitate and require a comprehensive democratic participation by all working people in conceptualizing and implementing the changes in their labor process. Practice has documented that the role of the production workers in the introduction of revolutionary innovations and in the inventors and innovators movement is enhanced rather than reduced. Comprehensively involving the workers in technological innovator processes is a crucial precondition for tapping the efficiency potentials in the scientific and technological revolution as well as for the exercise of power by the workers class in alliance with all working people, for the steady spread of socialist democracy.

It is of decisive concern to the party organizations in the enterprises of our economy to enable the working people to play that role and further mold attitudes, motivations and the proper character traits for it.

Second: Another crucial cause for the growth of the subjective factor is found in the qualitatively stronger role live labor plays in boosting labor productivity and efficiency. Lenin it was, as one knows, who said that ultimately a higher labor productivity would be crucial for the victory of socialism. Labor productivity, as Marx explained, is nothing but the use value or effectiveness of concrete, live labor. Marx called man's labor "the living and shaping fire."<sup>15</sup> Lenin wrote: "The first productive force of all mankind is the worker, the working person."<sup>16</sup> Is it so now that the weight and role of live labor are diminishing with the scientific and technological revolution--perhaps because new scientific and technical achievements mainly take shape in terms of new working tools, materials and so forth, i.e. mainly in forms of embodied labor? Precisely the opposite is the case: Never before in the history of the productive forces has the role of live labor, of the main productive force or of man, been as crucial as it is today. This is the outcome of inherent inevitabilities in the development of the productive forces in the scientific and technological revolution.

It brings about changes in the content and function of live labor. The basis for it is the formation of a new type of technology and new techniques altogether that allow man to step out of the production process as such: "Through applying these technologies man more and more steps out of the production process of material goods and becomes the creative shaper and controller of the socialist reproduction processes."<sup>17</sup>

Whatever type of technology is used, it largely determines the ways and means of the cooperation between man and working tools, the division of function as between man and working tools and essentially also the cooperation among men in the labor process.

The type of technology the industrial revolution has brought about, which is typical of capitalist production, chains man to the machine and subjects live labor to embodied labor--as much as accumulated capital subjects and exploits human labor. The type of technology the scientific and technological revolution brings about, which will be typical of the material-technical base of the communist mode of production, releases man from the servitude to the machine--as much as socialism has released the working people from the servitude to capital.

The scientific and technological revolution makes possible the release of human brains, hands and hearts for more creative activities, the proper field of human activity.

Mainly on the further development of technologies and of the working tools toward automation depends the extraordinary economical application range and also the economical "multiple use" of microelectronics. Through the development and application of information technology based on microelectronics, the range for the transfer of physical and, above all, spiritual-intellectual components of human labor to machines is vastly broadened, and the field of technological applicability is qualitatively enlarged. New and further developed automated working tools evolve at a scope and speed that cannot even be fully anticipated today.

Of course--these processes lead to enormous production boosts by the mere fact that heavy and monotonous work in various directions is "better" done by machinery, for example by industrial robots, than by man. At the same time, the potential of highly trained working people is converted completely into increasing labor productivity not until the substance of their labor assumes still more creative features. The crucial questions for the prospects of these processes here also is what the proportions are between live and embodied labor here.

Especially in this regard capitalism shows clear, insurmountable obstacles: There the use of new, production-boosting types of technologies does not as such lead to releasing people from heavy and monotonous labor, but from labor altogether. That makes it perfectly understandable that the workers class is biased against capitalist intensification and rationalization. So a new contradiction is developing and deepening in capitalism, derived from the basic contradiction between the further increasing role, due to the scientific and technological revolution, of live labor and its exploitation in the form of embodied labor accumulated in the form of capital.

The new social character of labor in socialism from the outset has distinguished itself, in principle, by its creativeness as an attribute of free labor, in particular as labor freed from exploitation. At the same time, any given concrete substance of the working people's labor determines the degree to which that creativity is released. Precisely by introducing new technologies that revolutionize the reproduction process, qualitatively new possibilities can be opened up for the creative live labor of man.

According to the experiences thus far in introducing key technologies, it is indeed no exaggeration to conclude that decisive changes are occurring in man's labor activity. That is already shown by the possibilities for using first-generation industrial robots, which are now mainly being used. In that this robot technology liberates man from manual operations, especially from heavy working conditions and less substantive activities, it already contributes significantly to enabling man--also in the political-economic sense--to take over more high-grade activities in the production process. This tendency is going to gain greater weight as we succeed in organizing by means of industrial robots a flexibly automated production or use second-generation robots.

The experiences in the application of modern technologies emphatically underscore that the working people's high training level achieved is an essential socioeconomic impulse for the broad-range effect of the application of modern technologies. They also point to the need for devoting the greatest attention in combine planning and party organization leadership activity to a thorough and long-term preparation of the working people for using modern technologies.

Preparing for the use of modern technologies is an exceptionally creative process as it amounts not only to applying new data, but also to the massive production of new data by inventors and innovators.

As important, for instance, as scientific development work is for solutions for new electronic systems, equally so, for comprehensively tapping the efficiency potential of microelectronics, are the pervasive changes in the working people's skill and qualification structure. The automation of routine processes will greatly diminish the today still necessary range of monotonous, burdensome labor. With it, the field of application for creative projects is broadening, and not only in R&D, but also in preparing the use of the new technology and even in the production process itself. Creative labor is going to be less and less a domain of science. Creative projects are going to play an increasingly decisive role in the production process itself in boosting labor productivity.

As practical surveys have shown, the creativeness of the production workers at present develops mainly under two aspects: the production workers' active participation in preparing and implementing scientific and technological innovations and the influence of the scientific and technological progress on the production workers' direct activity, mainly on the substance of their labor and the enrichment of their labor by more creative elements.

The investigation of the influence of the scientific and technological progress on the work machine operators do in using feeding robots for machine tools, e.g., calls attention to the following tendencies:

--The potentially possible personality-promoting and, at once, productivity-increasing effect of the scientific and technological progress is utilized all the more, the more one succeeds in installing complex and, at the same time, flexibly automated production sectors. Mainly thereby, labor can be taken out of the immediate production process and assigned to economically and socially more high-grade jobs.

--We must make a still more deliberate use of the opportunities to enrich the working people's labor substantively even in the present state of science and technology and to get a fuller economic benefit out of their labor capacity. That relates, in particular, to reorganizing the division of labor in the work collectives, mainly to surmounting the divisions among labor-preparing, implementing and securing activities, e.g. by expanding the tasks of machine operators.

Time and time again we find: Especially modern technological developments confront production workers, innovators and inventors with greater and more ambitious tasks. And this is so not only because the range of application for these latest scientific and technological developments is exceedingly broad. Their effects, to a great extent, become fruitful only through connections with technology already in place, through more complex technological and organizational changes in their perimeters. They thereby make patently indispensable the involvement of production workers who know much and have extensive experiences in the operational field of that technology. Moreover: Revolutionizing technological transformations become economically fully effective, generally, only through systematic rationalization. All these reasons bring it about that the role of the production workers in introducing revolutionary innovations and in the inventor and innovator affairs increases rather than diminishes. And this makes the all-inclusive involvement of workers in technological innovator processes a decisive precondition for tapping their efficiency potentials from the outset.

We must never lose sight of that technological transformations in production often greatly affect the material working conditions of many working people and that many social changes in the lives of the people come from it. That calls for a highly conscientious, analytically sound and prescient planning for all the social processes relating to technological progress. And this involves much more than preventing "social consequences," as is often said. What is involved here rather is the deliberate development of progressive labor contents appropriate to the socialist character of labor.

Therefore a well-timed and prescient involvement of the working people in solving the new tasks, especially their active participation in production rationalization and the application of scientific and technological data, is not an additional factor going beyond the actual socialist rationalization process, but an inherent requirement of socialist rationalization. The quality of the party organizations' political-ideological work is gaged mainly by the way in which, in these complicated processes of technological change, the relationship of trust between party and working people is reinforced and becomes effective as an impulse for social advance.

Third: The exacerbation of the international class struggle on all its fronts--the economic, the scientific and technological, and the ideological--is a basic cause for the increasing role of the subjective factor.

As practice has shown, there is closer reciprocal influence and interaction between the internal and external factors that determine social, and so also economic, advance.

Even when the economic strategy for the 1980's was being drafted, prior to the 10th SED Congress, the SED took the complex effects of the internal and external factors into account. It took account of the fact that in the foreign policy and foreign economy conditions, because of imperialism's confrontation course and the capitalist crisis, suspicious changes had occurred and are still occurring. At the same time--and therein precisely lies the party's achievement--it analyzed the grown material and intellectual potentials and, proceeding from there, set the revolutionary task to speed up the transition to comprehensive intensification. Practical experience gathered in recent years proves how correct and scientific this course is.

The 7th SED Central Committee session analyzed the internal and external factors in their interaction and complexity and arrived at the conclusion to carry on resolutely the proven policy of the eighth, ninth and 10th party congresses for the good of the people.

In this the party is confident that this requirement, inspired by historic optimism and the confidence in our own strength and the strength of our fraternal alliance with all socialist countries, especially the Soviet Union, will find great response among the GDR citizens. The initiatives of the workers class, the cooperative farmers and all other working people have confirmed this course is correct. This also has confirmed the realization that the working people's attitude, their work enthusiasm and discipline, their initiatives for the all-round, especially economic, consolidation of the GDR--in other words: the subjective factor--can most emphatically be developed when the party openly presents the people with the complicated interconnections between the internal and external conditions for its policy, explains the dangers to world peace emanating from U.S. imperialism and, along with it, brings out a realistic alternative for the confrontation course by the most aggressive imperialist circles.

In this it mainly focuses on consolidating socialism in the GDR as the most important contribution the working people can make to the preservation of peace. As the many working people's initiatives toward operating on peace shifts on the world peace day for economically strengthening the GDR in the 35th year of its existence show, that orientation is consented to everywhere. It also confirms the correctness of the party's view that the importance of the subjective factor for all further social advances is increasing significantly: "In the further development of the socialist production relations, the deepening of the social division of labor and the increasing economic interlinkage, the subjective factor, the responsibility of each work collective and that of each individual, is playing an ever increasing role. The working people's awareness, their labor discipline and their attitude toward socialist property, their sound political knowledge and technical skill--as shown by the experiences in every sector--are becoming a crucial impulse for further successful advances."<sup>18</sup>

#### FOOTNOTES

1. E. Honecker. "Strength of Socialism--The Decisive Guarantee in the Peace Struggle," NEUES DEUTSCHLAND, 13 February 1984, p 4.
2. E. Honecker, "In kampferfuellter Zeit setzen wir den bewahrten Kurs des X. Parteitages fuer Frieden und Sozialismus erfolgreich fort" [In These Times of Struggle We Press Ahead along the Road to Peace and Socialism Charted by the 10th Party Congress] (7th SED Central Committee Session), Dietz publishing house, Berlin, 1983, p 30.
3. "SED Central Committee Secretariat Conference with the First Kreis Secretaries," NEUES DEUTSCHLAND, 19/20 February 1983, p 1.
4. Cf. "Statistisches Taschenbuch der DDR 1984," Staatsverlag der DDR, Berlin, 1984, pp 25 f.
5. Cf. NEUES DEUTSCHLAND, 7 August 1984, p 1.
6. Cf. "Statistisches Taschenbuch," op. cit., p 25.
7. E. Honecker, "In kampferfuellter Zeit . . ." loc. cit., p 41.
8. Cf. W. Felfe, "Our Marxist-Leninist Agrarian Policy in Implementation of the 10th SED Congress Resolutions," "Vorlesungen und Schriften" [Lectures and Essays], CC SED party "Karl Marx" Academy, Berlin, 1984, p 39.
9. Cf. ibid., p 11.
10. Cf. "Nach neuen Masstaben die Intensivierung umfassend organisieren. Seminaristische Beratung des Zentralkomitees der SED mit den Generaldirektoren der Kombinate und den Parteiorganisatoren des Zentralkomitees am 8. und 9. Maerz 1984 in Leipzig" [Comprehensively Organizing Intensification by New Standards. SED Central Committee Seminar Conference with the General Directors of Combines and Central Committee Party Organizers on 8 and 9 March 1984 in Leipzig] (From the speech of Politburo member and Central Committee secretary Comrade Guenter Mittag), Berlin, 1984, p 36.
11. Cf. K. Marx/F. Engels, "Werke" [Works], Dietz publishing house, Berlin, 1956 to 1968, Vol 25, p 271.
12. This parameter, of course, not only reflects the economizing in live labor, yet taken by itself it does not reflect either the development of total outlays because one cannot tell from it whether, e.g., production consumption slowed down or rose faster.
13. K. Marx/F. Engels, op. cit.
14. "Oekonomische Strategie der Partei--klares Konzept fuer weiteres Wachstum" [The Party's Economic Strategy--A Clear Concept for Further Growth] (GDR Economic Sciences Conference 1983), Dietz publishing house, Berlin, 1983, p 76.

15. K. Marx/F. Engels, op. cit., Vol 42, p 278.
16. V. I. Lenin, "Werke," Dietz publishing house, Berlin, 1955 to 1965, Vol 29, p 352.
17. K. Hager, "Gesetzmaessigkeiten unserer Epoche—Triebkraefte und Werte des Sozialismus" [Inevitabilities of Our Era--Driving Forces and Values of Socialism] (Speech at the SED Central Committee Social Sciences Conference), Dietz publishing house, Berlin, 1983, p 44.
18. E. Honecker, "Arbeitermacht zum Wohle des Volkes" [Workers Power for the Good of the People], Dietz publishing house, Berlin, 1984, pp 372 f.

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GERMAN DEMOCRATIC REPUBLIC

STATUS REPORT ON WORKING WOMEN; EMPLOYMENT TREND ANALYZED

East Berlin SOZIALISTISCHE ARBEITSWISSENSCHAFT in German Vol 28 No 5, 1984  
pp 377-82

[Article by Hanna Grabley, Prof Dr, director of the scientific branch, "Bruno Leuscher" Academy of Economics, Berlin: "Status and Trend of Employment of Women in the GDR"]

[Text] The 35th anniversary of the German Democratic Republic is a good occasion to turn to an analysis of the important area of women's professional activities and the accomplishments and tasks relating thereto. Women have always received the total attention of the party of the working class, the socialist state and of all forces of society. The accomplishments in this area are also characteristic of the social progress our country has achieved. Here one can also find clear confirmation of Karl Marx's words which he wrote to Kugelmann in 1868: "Social progress can be precisely measured by the social position of the fair sex (including those who are not fair)." 1

The achievement of equal opportunities for women in the social working process --stated as a goal in the constitution of the GDR, the program of the SED and the labor code of the GDR--is part of the development of socialist conditions of production and a significant impetus to personality development in socialism. Professional activity by women, from an economic point of view, is also required for the utilization of the most important national economic resources, the social labor potential, roughly half of which consists of women who are able to work. The successes in carrying out our economic strategy of socialist intensification, based on the unity of economic and social policies, are significantly affected by the utilization of female labor resources. Professionally active women--who also constitute about half of the actively engaged social labor assets and therewith of our main productive power (in 1982, 46.9 percent of GDR's working people were women) 2--and the further development of their labor potential, contribute decisively to our successes in scientific-technical progress and to the increase in labor productivity.

In all of this one can start with the fact that the actual opportunity to combine professional activity with motherhood is--and can be--increasingly better provided under the conditions of socialism. The woman's activity in the work process as well as the role which she realizes as mother and wife under new conditions, both have an increasingly positive effect on her personal development and that of her partner and children who help this process by a gradual

development of a new division of labor within the family. Ideologic, legal, economic, social and other conditions have been increasingly structured, and continue to be further developed, to provide better solutions--as a political, social and economic function--to the problems of working women which are compatible with their duties as mothers and which avoid possible constraints on participating in the work process and conflict situations. Proof of this is provided by the recently enacted socio-political measures for assistance of women with three or more children which are designed to grant relief with regard to the professional activity as well as support for three-children families.

Nevertheless, a number of problems remain to be solved to achieve further advances in the area of working women. The measures implemented for scientific-technical progress, shift work and changes in the structure of the labor force in particular also impose new requirements on the availability and mobility of women in the working place.

At the same time, it is necessary to duplicate the level of professional activity of women which has been reached after decades of troubles and efforts. It can be said without reservation that employment of women in the GDR has reached a level which is high even by international standards. This applies--considering the limits imposed by historical realities--to the volume or extent as well as to qualitative characteristics.

The extent, the quantitative measure of employment, and the progress made in this area are reflected in the degree of employment of women fit for work which has risen considerably during the past 35 years (see Table 1).

Table 1: Degree of employment of women fit for work in the GDR in percent

1955	1960	1965	1970	1975	1980	1983
61.2	69.8	76.2	81.9	86.5	87.6	89.0

Sources for the years specified: 1955 to 1975, "100 Years of August Bebel," in "The Woman and Socialism," PANORAMA 1978, p 176; 1980, I. Lange: "On Current Problems Regarding the Realization of SED's Policy Toward Women After the 10th SED Party Congress," in INFORM. DES WISSENSCHAFTLICHEN RATES, "The Woman in Socialist Society," 1981, No 6, p 34; 1983, I. Lange: "Policies for Women in the 35th Year of the Republic," NEUER VEG 1984, No 1, p 3.

Thus, nearly 90 percent of employable women in the GDR are in the labor force or in training. Also connected therewith was a process of equalization of the previously large territorial differences between the regions of the GDR, although the fact that some of them show a degree of female employment exceeding 90 percent suggests that there are certain reserves which can be tapped despite the high degree of saturation shown by this indicator.

This positive development was also supported by the socialist educational policy to a large degree. If one analyzes the levels of female employment with

regard to qualifications, a clear relationship can be noted between the level of qualifications and the professional activities of women: the commitment of women to their profession and to working increases with their qualifications.

Another characteristic of the quantitative development of women's professional activities is the increase in the share of their employment in the national economy (see Table 2)

Table 2: Percentage of women of employed persons (excluding trainees) in the GDR

1955	1960	1965	1970	1975	1980	1982
44.0	45.0	46.7	48.3	49.6	49.9	49.6

Source: Statistical Yearbook of the GDR 1983, p 115

The share of women in the employed social reservoir of labor--considering workers and employees in the state-owned sector and in cooperatives--is even a little higher and occupies a respectable place when compared to CEMA countries (see Table 3).

Table 3: Percentage of women workers and employees in the state-owned and cooperative sector of CEMA countries

Bulgaria	48.7	Cuba	32.5	Romania	37.2
GDR	50.5	MPR	46.2	Hungary	44.8
CSSR	46.2	Poland	43.5	USSR	51.2

Source: Statistical Yearbook of CEMA Member States 1981, Moscow 1981, p 413 (in Russian)

For a variety of reasons--of which the ideological and the still partially existing traditional distribution of roles in the family, in which mothers are primarily responsible for keeping house and caring for children, are important--the extent of women's ability to work is still diminished to a certain degree by part-time work. Finding a gradual solution to this problem is important and in the interest of the social and economic effectiveness of our national economy. However, recourse to part-time work should be taken if it solves the problem of compatibility for women who take care of families and are in a job, if it also satisfies the institutional demand for labor.

The SED's social and women's policies have been responsible for important new progress in this area during the past few years. With the increasing employment of women in the GDR, the following qualitative changes also occurred in the professional activities of the female labor force:

1. Working in a job is occupying a new place in the life of women and has shifted from previous occasional and periodic to continuous participation in

the social work process. It is characterized by concentrated efforts to create the foundation for work in the early years, the predominance of professional activity during the ages from 20 to 60 and by diminishing professional activity in the years thereafter.<sup>1</sup> This continuity is a key qualitative standard of women's professional activity as also documented by research into the relationship between lifetime work and its interruptions.<sup>2</sup>

2. The level of qualifications for employed women has been raised significantly (see also Table 3). However, concerned by this subject: "As women entered the work process, they also became qualified, with progress evident if one considers that in 1950 only 14 percent of women were professionally trained."<sup>3</sup>

Table 3: *Levels of women's qualifications in the socialist economy of the DDR (percentage of working women)*

Level of qualification	1950	1970	1980	1982
University degree	7.6	11.1	5.5	5.9
Professional school degree	6.4	7.3	13.5	14.6
Master craftsmen		11.7	10.8	9.8
Skilled workers	39.1	47.1	32.3	34.3
Semi- and unskilled workers (including some professional training)	31.8	31.0 <sup>4</sup>	36.8	25.4

Sources: 1971, 701: "Frau In Der DDR: Volks- Oder Arbeit" [The woman in DDR, Facts and Figures], State Planning Board of the DDR, 1975, p. 34; 1975 to 1982, Statistical Yearbook of the DDR (1981), pp. 112 and 122.

As a result of this trend, the number of women with professional qualifications has increased from 3.5 million in 1971 to 2.90 million in 1982; an important historical achievement that is only possible under socialism. Consequently, the level of qualification for working women in the socialist economy is coming ever closer to that of working men. In 1982, the pattern for working men showed 4.6 percent as university students, 7.9 percent as professional school pupils (here the female's share is even bigger), 6.4 percent as master craftsmen, 3.8 percent as skilled workers and only 15.3 percent as unskilled and semi-skilled workers (including those with some professional training).<sup>5</sup> The differences which have become apparent here, simultaneously point to one of the anomalies which must be taken in the further development of vocational training: the conditions of socialist intensification and also to the requirements for continuing vocational training which must go hand in hand with the rational utilization of this important segment of the social labor reservoir and its effective implementation.

3. Women's professional activity in the DDR is tied to their increasing responsibilities in the social work environment. In 1981 about one third of all

managerial functions were carried out by women and even 56.6 percent in the cultural and social areas (including national education and health) and about 50 percent in commerce, light industry, the service sector and the postal and telecommunications field. The percentage of parliamentary delegates was 38.4, of mayors 28, of school principles 32, and of judges, 54.<sup>7</sup>

Important prerequisites for achieving this result were: an increase in the level of professional qualifications; acquisition of professional experience and political maturity, attested to by the fact that more than one third of SED candidates and members and more than half of Free German Labor Federation members are women who perform a significant part of the electoral functions.<sup>8</sup> Moreover, the ability of women to assume managerial functions--as viewed through their obligations as mothers and toward their households--is playing a significant role in making this process work. Interruptions in professional activities by giving birth, being mother for a year and other factors, almost require a managerial role which furthers the intelligent, farsighted, and long-term preparation of women for responsible tasks in the work environment. These may well be carried out by women frequently after having lost time to their male counterparts, but then equally well.

4. Qualitative changes have also occurred in the employment of women in the economic sectors and their branches. Aside from overcoming ideological barriers and problems related to qualifications, the scientific-technical progress has also opened doors to women to new work processes (see Table 5).

Table 5: Number of women employees in the economic sectors as a percentage of all employees.

Economic sector	1950	1960	1970	1980	1982	1950 : 1982
Industry	32.3	40.5	42.5	43.3	42.5	+ 10.3
Manufacturing trades	30.8	33.6	40.1	38.0	36.9	+ 6.1
Construction	8.0	8.6	13.3	16.2	16.2	+ 8.2
Agriculture and forestry	54.2	45.7	45.8	41.5	40.4	- 13.8
Transportation, postal- and telecommunication	18.8	32.3	35.5	36.9	36.5	+ 17.7
Commerce	53.1	64.6	69.2	72.8	73.0	+ 19.9
Other manufacturing	--	42.8	53.7	55.1	55.3	+ 12.5*
None-producing areas	58.0	64.2	70.2	79.9	73.0	+ 15.0

Sources: 1950, calculations based on the Statistical Yearbook of the GDR 1955, pp 111, 112, 117 and 118 (workers and employees only); 1960 to 1982, Statistical Yearbook of the DR 1983, p 115. \*Beginning with 1960

On the one hand, this shows a positive trend toward equal opportunities for women in the work environment of the economic sectors in areas traditionally reserved for men, for instance in industrial plants, manufacturing and construction. On the other hand, the percentage of women in economic areas which

traditionally showed a high percentage of female labor--such as commerce and the non-production sector--has increased even more.

An extremely high concentration of women can be found in the none-producing sector. In 1952, women still constituted 51 percent of the work force in education and culture and 76 percent in health and social services.<sup>9</sup> By 1982, the percentage of women in education was 76.5, in culture and art 53.2, in health and social services 86.2 (specifically, 86.1 percent in health and 86.7 percent in social services).<sup>10</sup>

The area of agriculture and forestry occupies a special place. Here it would be necessary to examine how a further decline in the female work force could be arrested by adjustments in the work environment and careful training of replacements.

Considering the fact that much more could and should be said about social progress but also about problems in the process of providing equal opportunities for women in the work environment, some targets for further progress should be mentioned:

1. The quantitative growth in professional activity is approaching its limit by use of the high degree of exploitation of female labor resources. Full employment of able-bodied women, standing at nearly 90 percent, has reached a very high level. The major task is to keep this figure constant and to prevent any regression. This is one of the major tasks of factories and combines in concert with the territorial organizations in their recruitment and effective reemployment of labor forces. The positive experiences of the Schweizer Initiative are relevant for this effort.<sup>11</sup>

2. As is the case for all working people, there is also a growing need for more rational utilization of employed women's potential for work; this applies to their time at work as well as to their educational potential which has seen such significant increase.

3. Conditions have to be expanded which will assure further continuity of work throughout the productive years. This relates to a large number of ideological, socio-political, managerial and also scientific tasks (organization of the work processes, working and living conditions, etc).

4. The qualitative growth of women's ability to work must be another focal point in organizing the professional work of women. This includes further development of the job and qualifications structure, in particular a higher percentage of university-trained cadre and of master craftsmen, as well as the establishment of conditions for long-term and purposeful cadre work in preparation for managerial functions. In consideration of the larger demographic increases of the male work force, expected in the future,<sup>12</sup> the insertion of men into the traditional employment areas of women (sectors of the economy) should be used to achieve greater equalization of the sex-related composition of labor forces which could have positive economic as well as social effects. Marx commented on this problem: "It is also evident that a mixed labor force, composed of individuals from both sexes and of varying ages...under certain conditions...must turn into a source of a more humane trend."<sup>13</sup>

5. The further development of ideological premises is an important prerequisite for continuing the great progress made so far in the area of women's employment. This relates both to the promotion of a new, socialist, division of labor within the family by the mass media, literature, art, schools and the workplace and to the enforcement of the rights of parents (and not only the rights of women); it also relates to the development of an ideological readiness on the part of managers who--through managing and planning the development of the labor force, initial and on-the-job training and cadre work--have a decisive influence on this process.

By solving these problems, the realization of true human rights, which is possible only under conditions of socialism, will continue. The opening address of the central committee of the SED on the occasion of the International Women's Congress of 1984 commented on this subject: "Our socialist state has realized--for the first time on German soil--the fundamental human rights which unconditionally include equal rights for women. Our Party has always advocated that women help shape the political, intellectual, and cultural life, that they take advantage of the opportunities for their overall development which our country offers and that they assume new and more important tasks."<sup>14</sup>

#### FOOTNOTES

1. K. Marx, "Marx to Ludwig Kugelmann in Hanover, London, 12 Dec 1868," in: "Marx/Engels, Werke" [Works] Vol 32, p 582.
2. "Statistisches Jahrbuch der DDR 1983" [Statistical Yearbook of the GDR], pp 111 and 112.
3. See E. Sachse/D. Schulz: "Problems of Working Women as Seen Through the International Trend and the Social Progress in the GDR," in SOZIALISTISCHE ARBEITSWISSENSCHAFT [Science of Socialist Labor], 1976, No 2, p 88 ff.
4. See M. Truebenback, "Die Reproduktion des Arbeitsvermögen im Zeitraum eines Arbeitslebens: [Reproduction of the Work Capacity in the Span of one Working Life], Teltow, KDT Aktiv together with Kombinat VEB Elektronische Bauelemente, 1983, pp 13 and 15.
5. E. Honecker, "35 Years of GDR Have Fundamentally Changed the Life of People in Our Country--Toast on the Occasion of the International Women's Congress 1984," NEUES DEUTSCHLAND, 9 Mar 84.
6. "Statistical Yearbook...1983" op. cit. pp 111, 112 and 122
7. See I. Lange, "Women Policies in the 35th Year of Our Republic," MEIER WEG 1984, No 1, p 3 ff.
8. Ibid.
9. See "100 Years of August Bebel," in "Die Frau und der Sozialismus" [The Woman and Socialism], Panorama, 1978, p 177.
10. "Statistical...." op. cit. pp 318 and 341.

11. See H. Grabley/G. Haendel, "The Connection Between Gaining Labor Forces Through Socialist Intensification with Qualified Employment and Creating an Adequate Work Environment for Women--Generalization of the Experiences of the Schwedter Initiative," contribution to the GDR Conference on the Science of Economy, 1983.
12. See D. Schulz/E. Strohbach, "Demographic Trend and the Labor Potential of Society in the GDR to the Year 2,000," WIRTSCHAFTSWISSENSCHAFT 1981, No. 11, p 1345 ff.
13. K. Marx, "Das Kapital," Vol 1, Berlin, Dietz Verlag, 1951, pp 515, 516.

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GERMAN DEMOCRATIC REPUBLIC

ENVIRONMENTAL PROTECTION MAINTAINED ALONGSIDE ECONOMIC GROWTH

East Berlin BERLINER ZEITUNG in German 15, 29 Nov, 6, 20 Dec 84

[Article by Thomas Leinkauf: "Economic Growth Must Not Pollute Nature; Technological Progress Is the Best Way for Careful Dealing With our Resources; Worldwide Environmental Protection No. 1 Task: Prevention of a Nuclear Inferno"]

[15 Nov 84 p 9]

[Text] During the past quarter of our century, the effect of man on his natural environment has reached a previously unknown extent and continues to increase. The changes in nature caused thereby today affect large areas of our earth, thus they have global character. The growing use of the natural resources may lead to increasing pollution of the environment through production wastes and consumption refuse. Thus environmental protection has become a problem that is increasingly gain'ng in importance on an international level. We want to examine various aspects of environmental protection in a series of articles. Included are utilization of industrial and agricultural by-products, protection of the air, water and soil. Our first article deals with three questions that now play a part in the international discussion on environmental protection: What is the No. 1 environmental protection problem? Is the world in an ecological crisis? Does environmental protection conflict with economic growth?

Firstly: The problem of man-environment that has arisen from a profound change of the environment because of the development of mankind is not new. Scientifically it was raised for the first time by Marx and Engels. "Not even an entire society," Marx wrote, "a nation, yes all simultaneous societies taken together are owners of the earth. They are only its holders, its beneficiaries and must leave it... to the coming generations in improved condition." Marx was only able to anticipate the breathtaking speed at which the exploitation of nature would occur, especially in the second half of our century, and the enormous problems for the protection of the environment that would arise from this circumstance.

When it comes to environmental problems, who does not think of endangered forests, polluted waters and air? Considerable efforts are undoubtedly required to master these problems. But the biggest threat arises now from the overarmament and confrontation course of imperialist forces. The dangers from nuclear, chemical or biological wars are immeasurably greater than all thus far known dangers to forests, waters, oceans, the soil, the flora and the animal world and the atmosphere. In the poison war against Vietnam alone, the U.S. aggressors laid waste to 5.6 million hectares of forest, or 54 percent of all forest stands of Vietnam, with high-explosive ammunition and chemical warfare weapons, especially highly toxic herbicides and defoliants. Hundreds of thousands of people sustained permanent health damages, especially genetic damages. Eliminating the danger to nature will take several hundred years.

To prevent a nuclear inferno whose consequences would be many times as catastrophic as the Vietnam war is the vital prerequisite for bringing now existing acute environmental problems under control and to solve them. This relationship is recognized by personalities and numerous political movements in capitalist countries, too. Peace is a basic condition for the protection of our environment. The varied environmental problems are of course not solved with that.

Secondly: At present the total volume of goods and services in some countries double every 15 years. Thus the quantity of wastes that pollute the soil, the air and the water also grow--even though depending on the level of the scientific and technological development in the case involved. Quite frequently the conclusion is drawn from that--especially in capitalist countries--that humanity is stuck in a deep ecological crisis from which there is no escape. In this assessment, the social nature rooted in the capitalist production conditions of many of the present environmental problems is overlooked or consciously obscured. Of course, environmental problems do not stay away from the socialist countries either and they arise anew time and again because of new interference in nature. And last but not least because, e.g., air pollution does not stop at country borders. But by its nature the ecological crisis is no "world crisis," because there are quite different reasons for environmental problems and approaches to their solution.

#### **Ecological Crises Are Inconceivable With Us**

In socialist society the effective and proportional shaping of the inter-relationship among man, society and nature are the decisive way for solving the environmental problems. The efforts in the GDR are directed towards implementing the goals set in the SED program for environmental protection, "to maintain nature as a source of life, of material riches, of health and joy of the people, to use it economically on a scientific basis..., so that it can serve the secure and happy life of the future generations in the communist society."

Two closely interwoven tasks develop from this social concern. For one thing, it is the purpose of environmental protection to improve the working and living conditions of the people. On the other hand, it pursues the aim to

raise the effectiveness of our economy. This is a major strategy for the 80's corresponds best to the goals of environmental protection. The scientific-technical and economic process are directly reflected in environmental protection. It is an integral part of our principal task in its unity of economic and social policy. Therefore, despite all problems in ecological crisis situation is inconceivable.

**In capitalism, environmental protection is subordinated to the striving for maximum profit.** That does not mean that no measures are taken for environmental protection there. It is not by chance that an entire "environmental protection industry" has arisen in the capitalist countries in recent years. Thus it is at present already in second place among the capitalist branches of industry as regards profitability. Nevertheless, frequently it requires quite considerable pressure by democratic forces and citizens' initiatives to enforce environmental protection measures against the resistance of the monopolies.

Ecological crisis situations in the capitalist countries are basically pre-programmed by the sporadic approach to the environmental protection problems, dictated especially by profit interests. One road now followed by numerous monopolies to avoid such problems is the shifting of entire environmentally polluting industries to developing countries. Thus 9 percent of the world industrial production with outdated technology is now located there. Such production is almost completely controlled by multinational monopolies.

The Soviet Union and the other socialist countries are trying at quite different levels to find starting points for tackling various environmental problems jointly with capitalist states and to conclude appropriate agreements. For example, there is no really good water for 4% percent of the rural population in 91 developing countries; therefore about 10 million people a year die of infections. This situation could be eliminated if about \$30 billion would be available within the next 10 years. That would be less than 10 percent of the U.S. armament budget.

As early as 1973, the Soviet Union had submitted for consideration by the 28th session of the UN General Assembly a proposal for reduction of the armament budgets of the permanent members of the Security Council by 10 percent and use of part of the saved funds to aid the developing countries. Its implementation failed—due later to the foreign policy of the resistance by the United States and its partners.

**Thirdly: In capitalist countries the opinion is frequently expressed that "humanity" will extricate itself from "the ecological crisis" only if it renounces further economic growth.**

**The How of the Production Is Important**

Of course, economic growth does not automatically lead to degradation of the natural environment. It all depends on how and under what specific conditions necessary for socialist human development. In addition, technological revolutions taking place are increasingly bringing in new and modern for

processes and technologies that make highly productive and environmentally acceptable production possible. One way is to produce while economizing on resources as much as possible, as is the case, e.g., by the broad use of microelectronics. It has been demonstrated that economic growth is possible with constant or even lower consumption of raw materials and energy. Such production limits unnecessary intervention of man in the raw material reservoir of our earth. The other way consists in producing as free of by-products as possible or not to store the by-products accumulating in the production process in the environment, but to utilize them industrially. There are numerous examples from our economy that demonstrate the possibility of effectively combining in this manner growth and environmental protection.

Therefore, our economic strategy is strictly guided along this course. Its implementation according to plan in the entire economy at the same time provides us with the riches--only to be obtained by further growth--to develop further scientific-technical solutions for an ecologically beneficial production but also to finance various other measures for environmental protection. All arguments for even better environmental protection are not arguments against, but in fact arguments for, economic growth.

[29 Nov 84 p 9]

[Article by Bert Doerner and Thomas Leinkauf: This part of the series deals with the utilization of industrial by-products]

[Text] With the development of the productive forces and the social needs, the number and the quantity of natural materials and amounts of energy for industrial use has grown rapidly and continues to do so. In the 70's over 100 billion tons of raw materials were obtained from the earth, i.e. nearly 25 tons for each inhabitant of the earth. But the extraction of mineral resources in the world doubles every 15 years.

#### New Types of Materials Pose New Tasks

But on the average a maximum of 10 percent of the raw materials is processed into finished products. Most of the raw materials are returned to nature but in a changed condition far removed from the natural one. This signifies that up to 90 percent of the raw materials produced turn up as by-products or remain in the environment. For example, the amount of carbonic acid in the atmosphere quite considerably increases every year with the burning of billions of tons of bituminous coal, oil and natural gas. And the development of science and technology makes it unavoidable that more and more such new types of materials are created that have not existed in nature, that could not even be produced until a few decades ago. This increasingly forces the world, especially the developed industrial states, to find scientific-technical solutions for using the by-products, to produce more efficiently and to improve environmental conditions.

At present in the GDR more than 50 different kinds of industrial by-products accumulate in an quantity of 70 million tons annually. Intensification of

production, reduction of production consumption and of the by-products, improvement of the raw material management and of the use of secondary raw materials together with the application of new technologies and processes for the production and use of domestic raw materials as well as the creation of new production capacities brought about that the utilization of the by-products increased from 1975 to 1983 from 20 percent to 42 percent or from 12 to 30 million tons. In 1983 that corresponded to a contribution of 5.7 billion marks to the raw material fund of our economy. The following materials were especially used: lignite ash, metallurgical slag, plastics residues, wood shavings and used oil.

This development as well as the achievement of 72 investment projects for the recovery and renewed use of secondary raw materials in this 5-year plan period leads to an efficient utilization of the natural resources and to better environmental conditions. How effective the utilization of by-products and secondary raw materials has become is evident from the following comparison of figures: If secondary raw materials are used in place of new raw materials from nature, one-million-mark costs for making raw materials available would decline by 75 percent.

#### Employment of Secondary Raw Materials Has Many Effects

But all in all the benefit to our society is much greater, for we also reduce raw material imports, save natural resources, and reduce environmental pollution of water, air and soil. Not least of all, the costs for purification plants, establishment and operating of waste dumps and garbage dumps and also taking over useful agricultural and forestry areas are reduced.

#### Technologies Are Largely Known

In Berlin the degree of utilization of by-products achieved in 1983 had been about 44 percent, by 31 August 1984 it reached 54 percent. This corresponds to utilization of 102,000 tons of material. It was possible to achieve this result especially by putting additional regeneration capacity in operation in capital city enterprises, such as the regeneration plant for used anti-freeze-water mixtures in the VEB Auto Trans Combine. There are also effective activities regarding by-product utilization in the VEB Berlin Chemie, (chemistry), in the VEB Fahrzeugausrüstung (vehicle equipment), in the VEB Secura Works and in the VEB Elektrokohle.

In 1985 a 60-percent degree of utilization is to be achieved in Berlin. This means that additional fields of application must be developed for about 17,000 tons of by-products. But for some groups of by-products there are still inadequate possibilities for regeneration and utilization. In those cases, the present degree of utilization is only about 10-15 percent and must be quickly raised.

Processes and technologies of possibilities for use are largely known for about 80 percent of the total quantity of industrial by-products. The degree of utilization can be increased above all by making available appropriate equipment, installations and processes and by expanding the possibilities

for their use. This applies especially to lignite ash, grindstones, Siemens-Martin slag, wood chips, solvents, flotation and distillation residues, electroplating sludges and sludges containing calcium. Good experiences are made, for example, in the Soviet Union with the conversion of wood chips into biotechnical protein for animal feed. With one ton of wood chips it is possible to produce about 150 kg of pork or 400 kg of poultry.

But utilization of by-products is not the principal way for the solution of the environmental problems connected with their accumulation. Rather all measures directed towards the efficient use of the resources, for the protection and sensible shaping of the environment--also internationally--are to be used completely or in a complex manner, i.e. they are to be produced low in by-products or in advanced cases, by-product free. For that protects the environment best and at the same time leads to more economical utilization of natural resources. Especially on this relatively new road we must better succeed in the future to achieve economic growth and environmental protection as an integral component of the metabolism between nature and society. A good example for that is the production of the Synthesewerk Schwarzeide. There they succeeded in reducing the accumulating by-products to 8 percent.

#### 200 Projects are Cooperatively Developed

Development and introduction of low by-product technologies are necessary especially in the chemical industry, in the coal and energy industry, metallurgy, the metalworking industry, the glass, ceramic and cellulose industry and in the foodstuffs industry. In our country, special attention is devoted, e.g., to the production of briquettes and aluminum chloride as well as the production of sulfuric acid and ammonia.

The GDR ministry for environmental protection and water management coordinates the tasks for research and development of low-by-product technologies. In this connection 200 projects of the science and technology plans are being worked on with other ministries on the basis of joint agreements.

[6 Dec 84 p 9]

[Article by Bert Doerner and Thomas Leinkauf on the subject of clean air: "Technologies for the Protection of the Forests and for Purer Air."]

[Text] The increasing industrialization and urbanization as well as the growing traffic density, especially in our century, have caused a steady rise in the gas and dust pollution of the air.

At present more than 140 industrial pollutants contaminate the air over our planet. Even over the Hawaiian Islands, in the middle of the Pacific, the turbidity of the atmosphere increased about 30 percent between 1970 and 1980 alone. In some U.S. industrial regions the air is already so polluted that the electric wires rust in 4 years while formerly it used to take more than 20 years. The consequence is not only economic damage annually running into billions but also considerable damage to man, the animals and the crops.

### Emphasis Especially on Areas of Industrial Concentration

Intensification of energy production and economical energy use can significantly contribute to a positive change of this condition from which more or less all industrial countries suffer. For the condition of the air is considerably determined by the energy sources used, the heating fuels and propellants.

As many countries on earth, the GDR is based with priority on domestic energy sources with the lowest costs--thus in our case, lignite. A not inconsiderable advantage of its use, as compared with bituminous coal, heating fuel or natural gas, consists in the fact that its combustion produces only one fifth of the nitric oxide. On the other hand, the use of lignite temporarily damages agricultural and forestry areas, lowers the ground water level and the air is affected especially by sulfur dioxide and dust. Thus the conclusion can be drawn that every ton of lignite not used in the powerplants contributes to conserving soil and water resources and to reducing adverse effects on the air.

As early as the 70's, the GDR reduced the use of lignite predominantly by a multitude of measures for efficient use of energy in industry, agriculture and in the home on a scale that corresponds to the emission of sulfur dioxide ( $SO_2$ ) of about one million tons a year. As a result it was possible to maintain the quantity of all  $SO_2$  emissions at the same level with constantly increasing industrial production. This development continues in the 80's. Thus about 40 million tons of lignite a year were saved by efficient use of energy. This corresponds to at least 650,000 tons of sulfur dioxide.

We are now concentrating especially on measures to prevent air pollution in areas of industrial concentration. In connection with rationalization and reconstruction, modern processes and technologies meeting the requirements of environmental protection are being introduced in the first place in Berlin, and in the Halle, Leipzig, Cottbus, Karl-Marx-Stadt, and Dresden bezirks.

Desulfurization of flue gases in the combustion of lignite will increasingly contribute to limiting the discharge of sulfur dioxide. The GDR-developed limestone additive process had a significant part in that; the first constant large-scale test of lignite desulfurization in the world took place in the Vockerode power plant for two years. It has stood the test and stands out by high economic efficiency. According to a decision by the GDR Council of Ministers, for various types of heating plants and heat and power plants installations are now being built in Karl-Marx-Stadt, Leipzig and Schwarzenberg. Following analysis of the collected experience, it is planned to install this and other processes in additional installations for energy production during the coming 5-year plan period.

### Pollution-resistant Woods Are Being Cultivated

Especially endangered by air pollution are wintgreen conifers because their needles absorb sulfur dioxide in the winter, too. Therefore, great efforts are being made in forestry, too, to protect the forests from the consequences

of air pollution, to reduce damage to the timber and to maintain and rebuild productive forest holdings effective in terms of land improvement.

At present, for example, existing forest damages in the Erzgebirge are being combatted and reduced and in areas affected by sulfur dioxide--such as the Duebener Heide--measures are being taken to preserve the forests. But numerous such measures are necessary to raise the vitality and power of resistance of the tree stands. The efforts in forestry range from forest cultivation and soil fertilization to tree and plant breeding. In this connection, special importance is attached to pollution-resistant trees. Good results were obtained, e.g., by crossbreeding of European and Japanese larches. In addition, in the past 10 years, the GDR forest areas have been increased by about 14,000 hectares and now 20,000 hectares are being reforested every year. Intensive cultivation of the forest stands takes place on an area of 200,000 hectares.

In spite of all that, very great efforts of our socialist society are required for lasting protection of the forests. For this purpose, the GDR's own research and development work is further increased and internationally developed desulfurization processes are tested and used if suitable.

Of course, air pollution does not stop at country borders. In general, it can be stated that the GDR receives as many atmospheric pollutants as are passed on to others. There are, of course, certain differences in the balance sheet with individual countries.

#### Joint Steps for the Protection of the Erzgebirge

For example, much is being done jointly to avert further damage in forest areas on both sides of the state border between the GDR and the CSSR, especially in the upper Erzgebirge. As a result of several years of close cooperation, the governments of the GDR and the CSSR in the fall of 1981 concluded bilateral government agreement for the reduction of air pollution and its effects. On this basis, measures were agreed upon for the reduction of sulfur dioxide pollution, for lowering the discharge of odor-intensive substances, for the protection and preservation of forest areas as well as for scientific-technical cooperation. Plenipotentiaries of both countries coordinate, control and ensure implementation of the projects.

With these and other activities, the GDR at the same time takes into account the convention signed in Geneva in November 1979 at the All-European Environmental Congress on extensive border-crossing air pollution.

[20 Dec 84 p 9]

[Article by Bert Doerner and Thomas Leinkauf on protection of the water.]

[Text] Over 70 percent of the earth's surface is covered with water. A total of 97.2 percent of all water reserves consists of salt water of the oceans and seas. More than three quarters of the freshwater are stored in polar ice and in glaciers. An estimated 22 percent of the freshwater is ground water

of which more than half is found at a depth of 800 to 4,000 meters and therefore is hard to tap. The water of the rivers, seas and swamps amounts to only one percent of all freshwater reserves of the earth. About the same quantity as that of the water in all rivers is the volume of water contained in the organism of plants, animals and people.

#### Industrial Countries Have a High Demand

The water reservoirs of the earth are distributed very unequally. Precipitation also occurs geographically in extremely different quantities. As a result, especially for numerous developing countries the task arises to fight again and again against drought catastrophes and their consequences. The developed industrial countries are now especially faced with the task to meet the growing demand for water of households, industry and agriculture and to combine this with effective measures for the protection of the limited resources.

Production of one ton of steel internationally requires 50 tons of water; one ton of dyestuff, 500 tons; one ton of rayon, 1,500 tons; and one ton of synthetic fibers, 2,500 tons. Similar information applies to agriculture. The production of only one ton of grain requires 300 to 500 cubic meters of water. In countries with intensively operated agriculture, water consumption amounts to 50,000 to 70,000 cubic meters per square kilometer and continues to rise. It is obvious that such intensive use entails an enormous pollution of the water with extraneous substances. Protection of the limited resources by entirely different measures with the growing industrial development therefore becomes increasingly necessary. This demands enormous financial and material as well as scientific-technical efforts on the part of the countries involved. The costs for the installation of the latest highly effective purification systems in the enterprises of the Balkal area in the USSR, e.g., amount to a quarter of the value of the plant.

The GDR is one of the countries with a relatively low availability of water. Therefore the degree of utilization of the water in our republic is very high compared to similarly developed industrial states of Europe. At present nearly one half--in dry years even up to nine tenths--of the available resources are used in industry, agriculture, and households. Annually about 880 cubic meters of water is available per inhabitant of our country; on an international level, it is 10,000 cubic meters per capita.

#### Efficient Handling Is Indispensable

With average precipitation the natural reserve also will suffice in the next few years to meet the growing demand. Handling of water more efficiently than heretofore is indispensable to guarantee in the future, too, in dry years similar to 1982 and 1983, a stable supply meeting the quality requirements of the population and all areas of the economy. This is derived, for one thing, from the economic strategy for the 80's, especially from the task to achieve a better ratio between expenditure and yield. On the other hand, this necessity is derived from the status reached at the beginning of this decade

in the utilization and the qualitative demand on the natural water resources which, as is known, cannot be increased.

Great financial, and material expenses are required to get, channel, process, transport and purify water. For every million cubic meters needed as potable water and that is discharged purified as waste water, e.g. an average of 650,000 kWh of electric energy is required. A smaller demand for water also signifies a plus for our energy balance.

#### **Multiple Use Requires Protection**

The path for mastering the greater tasks in water management necessitates comprehensive intensification and rationalization with the aid of science and technology. But a reduction of water demand signifies also lesser pollution of the waters. This is especially important because completely meeting the demand for potable and process water absolutely necessitates repeated use of the waters.

Thus far remarkable results have been achieved in the GDR during this 5-year plan period with regard to efficient handling of water. During the first 3 years it was possible to reduce the specific water demand in the industrial combines and enterprises by nearly 15 percent. About 17 million cubic meters less of potable water was taken from the public network for industrial purposes. On the other hand, industrial enterprises made available from their installations more than 9 million cubic meters of potable water for the central supply. This made it possible to meet the consumer demand for potable water, which rises 2.5 to 3 percent annually, with significantly smaller investments.

These achievements were attained especially by accelerating scientific-technical progress, in particular the speedy introduction of new processes utilizing little water and waste water, closed water cycles, modern technologies and products. New water use norms have also helped.

Prerequisite for the efficient use and repeated use of water is its protection. Of growing importance is the retention of useful materials from waste water. With the purification and reprocessing not only process water is again obtained but also salts, metals, fats and other organic substances are reclaimed as raw materials for the economy. During this 5-year plan period, the pollution of the waters is to be reduced in this manner to an extent that corresponds to the average annual amount of waste water from the households of 5 million inhabitants.

In 1983 alone, new processes for reprocessing or production with low waste water were introduced in over 200 enterprises. That entailed a declining pollution and better protection of the seas and rivers, e.g., the Elbe, Saale and Mulde rivers heavily used by industry and agriculture. For example, new industrial sewage treatment plants were put on stream in the VEB Schwedt Petrochemical Combine, in the VEB Schwarzeide Synthesis Plant and in the VEB Espenhain Lignite Refining Plant.

### **Numerous Measures for Purification**

**Much is done for rationalization and expansion of sewage treatment plants where reclaiming of useful substances is not yet possible. Numerous measures serve the expanded treatment and purification of communal waste water.**

**The projects for the protection of potable water reserves are also numerous. There are about 9,000 protected areas for the curbs and springs for the central supply with potable water. Thus our socialist state makes great efforts to use water resources efficiently now and in the future and to protect them effectively.**

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GERMAN DEMOCRATIC REPUBLIC

INCREASED EFFICIENCY IN IMPLEMENTATION OF INDUSTRIAL ROBOTS

East Berlin WIRTSCHAFTSWISSENSCHAFT in German, Vol. 32, No. 10, Oct 84 pp 1564-69

[Text] The Second Users' Conference on "Ways and Means of Increasing Efficiency in the Use of Industrial Robots" took place in November 1983 at the Bruno Leuschner College of Economics in Berlin. It was sponsored jointly by the Berlin area "Industrial Robots" Development, Production and Users' Association (EPAG) and the interdisciplinary working group on Industrial robots of the College of Economics. Professor Dr Rolf Steber, dean of the College of Economics, welcomed more than 50 participants, among them representatives of EPAG and the Lichtenberg plants, scientists from colleges, universities and academic institutes, at the opening of the meeting. In his opening remarks, he described the objective of the meeting as a forum for a creative exchange of experiences and opinions on significant achievements and future points of emphasis in the area of increasing the effectiveness of the use of industrial robots.

The present state of the art of the use of industrial robots and the goals to be reached in the coming years in this area of accelerating scientific and technological progress strongly suggest a search for maximum effectiveness in every case of industrial robot use, which must theoretically and practically answer primarily the following questions:

- What are the conditions which determine the efficiency of using robots?

- How must these conditions be presented so as to support economic efficiency objectives in a comprehensive and long-term manner?

These questions, problem areas and patterns of the generation, development and influence of efficiency of scientific and technological progress are the areas of concern of the "Industrial Robots" research group of the College of Economics, as described to the attendees by its director, Professor Dr Roessel. This creates for the working group a close connection between basic and applied research, which receives significant impetus from its efforts in cooperation with the EPAG management and plants, the Economic Research Institute of the State Planning Commission and the Karl-Marx-Stadt Research Center for Machine and Design. In addition, the working group conducted several advanced courses for first-time users on problems of efficiency measurement and improvement of industrial robots, both in and outside the college; they were greeted with considerable interest.

The working group is aware of a great variety of educational tasks in directing and serving as a partner of the interdisciplinary youth project on industrial robots at the college of economics. Through close collaboration between scientists and students, significant achievements have already been noted in student research as well as in the preparation of the students for their future professional activities. The usefulness of the working group's activities to date is demonstrated by numerous studies, research groups, lectures, and by the high quality of laboratory and theoretical work.

Major research efforts at present concern the continuing refinement of factors impacting the efficiency of the use of robots. Some stages of this effort have already been reached, others will need to be addressed in the near future. According to Roessel, one of the first tasks will consist of recognizing, determining and systematizing the impact factors which have been identified. As a result of practical investigations, he says, the principles for a complex model of impact factors must now be created.

As a result of its analysis of various attempts at systematization with regard to their advantages and disadvantages, the working group's research starts out with cost-effectiveness considerations. This starting point facilitates not only the linkage of efficiency considerations in the use of industrial robots in industrial groups and plants with economic goal criteria, but also an effective connection with efficiency measuring methods. The impact factors thus determined, categorized by various hierarchic levels, are numerous; this fact brought the working group face to face with the problem of weighting and selecting the impact factors having efficiency-producing significance.

Closely connected with this is the quantification of impact factors as well as the proof and demonstration of their effectiveness. Present efforts are primarily directed toward quantifying the impact factors and, with the use of functional mathematical models, to determine their effect as to approach and magnitude upon cost-effectiveness. The fact that this approach method is clearly compatible with practical requirements was proven also by the next lecture on the program, which repeatedly and particularly emphasized the quantification of social impact factors, which is growing significantly as a result of mobilizing socialist advantages for accelerating the implementation of the scientific and technological revolution.

In line with the working group's insights gained to date, the following groups of efficiency-generating impact factors were defined:

--design and creation of technological production facilities including industrial robots;

--technological integration of the robot units into preceding and subsequent processes and the level of changes caused thereby;

--use of the technological production facilities of the preceding and subsequent processes as to their power and size, as well as qualitative utilization of the performance parameters of robots and machines.

As to future research tasks, it was stated that primarily the effective impact factors must be recognized and put to use, whereby especially the design and integration of technological production facilities are the principal determinants of efficiency. Even during the construction of the technological production facility the performance capabilities of its individual components must be taken into consideration to a greater degree than in the past. On the one hand, this means that synchronicity between the production task and the performance capability of robots and machine tools must be established; on the other hand, synchronicity also between the main performance parameters, the technological state of the art and the compatibility between robot, machine tool and the periphery.

Apart from the increasing mobility of industrial robots and the growing robot-machine integration, their increasing modular construction and last but not least the choice of locations for their use require additional consideration to accomplish greater economical benefits. In the integration of the technological production facilities greater emphasis must be placed on the question of complexity, since in the final analysis conditions are to be created for a comprehensive transition to flexible automation procedures through noticeable changes in the technological state of the art of entire process segments. In collaboration with partners active in the field, the working group submits the following approaches for further improvements:

- providing long-term design and technological lead time;
- direct integration of robot application concepts into the long-term augmentation strategies;
- concentrating investment resources by making long-term and goal-oriented preparations for use;
- integration of main, auxiliary and secondary processes with social changes.

However, efficiency potentials conceived in the design and integration of the technological production facility can be fully realized only with adequate complex utilization. The fact that this problem area is being increasingly addressed in production plants was made clear by similar contributions to the discussion by several participants. The quality and quantity of timely utilization determine to a large extent the increase in productivity, performance increase, relative and absolute cost reduction, and profit margins. In this connection, one of the significant tasks is the determination of causal impact factors for down time in the use of industrial robots. However, utilization must not be visualized as a purely technological concern; rather, it always requires an objective evaluation of the industrial robot, human operator, machine, the flow of raw material, organization, leadership and the social environment.

Finally, one of the main goals of the working group is a methodical insight into defining a projected state of the art of the use of industrial robots. To this endeavor, the highest priority belongs to the elaboration of norms and optimum values for measuring efficiency.

All insights gained to date have confirmed the fact that one of the basic principles for changes in impact factors consists of the following: consider the overall situation in making decisions; consider advantages and disadvantages; place increased emphasis on comparing different options and on using optimum conditions for economical use of robots. Future research activities at the college of economics will therefore emphasize the impact factors on the effectiveness of robot use.

The lecture by the EPAG Secretary, Dr Zerresen, started with the status of economical use in EPAG plants and with changes to be anticipated from robot production procedures, and went on to describe significant approaches to the solution of problems incident to the use of industrial robots. He too dwelled on the necessity for developing a long-term and complex preparation and secure maintenance of robot use in plants. He stated further that a critical evaluation of achievements within the EPAG had resulted in uncovering means for an even better utilization of the advantages of socialist cooperation. He formulated the following priorities for future work by manufacturers and users:

- development of "turnkey" system solutions, including both soft and hardware, for principal users;
- the establishment of a dispatcher service for maintenance and repair services in the area;
- full capacity use of the robots by proper capacity planning and utilization, with consideration given also to use for purposes external to the plant concerned.

The above-cited basic principles and priority tasks for increasing the efficiency of the use of industrial robots were reemphasized in the ensuing discussion; a number of advanced ideas were aired, even leading up to starting points for some solutions. Two major aspects dominated the exchange of experiences: the complex preparation and construction for use of industrial robots and proof of the economy and efficiency of robot use.

Apart from emphasizing the need for a complex evaluation of robot use as a unity of social and economic efficiency, Dr Thum of the Research Center for Machine Tool Design in Karl-Marx-Stadt listed the following basic prerequisites for a high economic effectiveness of robot use:

- an appropriate balance between the technological state of the art and the specific task at hand, especially by expressing the task subject in a manner appropriate for automating;
- prior testing of the basic technology before starting production;
- the need for multiple comparisons of economic options at every step of the preparatory phase.

Also mentioned as additional efficiency promoting factors in preparing for the use of industrial robots were the following: use of the central data bank; the

formation of interdisciplinary working groups, with representation by future operators; and goal-directed training and effective motivation of designers and engineers. (This contribution came from Engineer Oelschlegel, of the state-owned Berlin Metal Producing and Semifinished Products Works, and Engineer Rattunde of the state-owned Karl-Liebknecht Transformer Works in Berlin.)

Economist Wittig of the state-owned Electricity-Coal of Berlin stated that to generate great efficiency in the use of robots it is necessary to consider the complexity and dynamics of their preparation for use and their design characteristics. Thus the entire investment-design-repair cycle of the technological unit including the industrial robot must be given consideration from the very beginning of the design phase. At the same time he called attention to the fact that efficiency evaluation must be undertaken concomitantly with changing conditions in the preparation and implementation of robots in a dynamic and complex manner. This, he added, would require further development of the appropriate instrumentation.

Many other participants in the discussion dealt with problems of economic proof of the efficiency of robot implementation and its further improvement in connection with opportunities for improving their effectiveness.

Dr Wiede of Dresden Technical University described the linkage of operational yield calculations with those for the subject area or the plant concerned as a critical basis for measuring efficiency. He stated that specific efficiency measurements could be made by using complex coefficients, divided into either workplace or task-related use of industrial robots and into various levels corresponding to individual steps of automation.

Dr Duesterwald of the Leipzig Karl-Marx University dealt with special problems of performance development and motivation for great efficiency in robot use in state-owned economic conglomerates. He particularly emphasized the need for providing long-term economy of use by integrating the planned robot technology into complex strategic scientific and technological solutions. In evaluating the efficiency of such complex technological solutions, he said, more emphasis must be placed on planned increases in productivity goals as well as in production and its quality; also, it must be determined what capacity levels are required to bring this about. Using technological and economic comparisons of options, great efficiency in the planned automation design can already be addressed in the preparatory phase, thus providing an economic justification for the use of robots.

Mr Menzel, director of the interdisciplinary "Industrial Robots" youth project at the Bruno Leuschner College of Economics, using the concept described by Roessel of impact factors used for measuring efficiency, presented an approach for evaluating and weighting efficiency elaborated by the youth project which is based on a comprehensive quantified expression of efficiency.

Dr Sperber of the Bruno Leuschner College of Economics, presented significant experiences and objectives of the "Industrial Robots" research group in demonstrating social effects of the use of industrial robots. The research

group used the results of its studies to formulate conclusions for obtaining complex economic and social effects of the use of robots through the planned design and development of common work procedures in user groups.

The Wismar College of Engineering produced, as a result of research studies in various state industrial enterprises, a model for evaluating the efficiency of robot use within integrated manufacturing sectors. Professor Schmidt of the Wismar College of Engineering presented this basic model which has already been tested. It is based on calculating time savings in the manufacturing process through modifications in the materials handling system, and permits the derivation of specific technological engineering measures to produce greater efficiency. This presentation also demonstrated theoretical and practical efforts to satisfy requirements for a gradual transition to complex and flexible automating solutions incorporating the use of industrial robots.

Professor Dr Hoffmann of the Karl-Marx-Stadt Technical University dealt with another aspect of measuring the efficiency of the use of robots. From the linkage between intrinsic value, usefulness and efficiency he derived some ideas for producing great efficiency in use through a pricing structure for industrial robots.

Overall, the discussion elucidated great numbers of insights and problems in producing great efficiency in the use of industrial robots with regard to their design and construction. The points made in the discussion were confirmed in both their theoretical and practical aspects. Future priorities should be concerned with mobilizing the workers' creative capabilities and their proficiency in conglomerates and plants to an even greater extent for accomplishing the ambitious tasks in science and technology. At the same time, the opportunities for planning great efficiency of robot use while still in the preparatory stages must be put to better use. In view of new strategic requirements as to the complexity, dynamics and flexibility of the preparation and implementation of the use of robots, there are additional needs for improving the instrumentation for measuring and evaluating efficiency in the areas indicated.

In closing, Roessel described the significance of this Second User Conference with the statement that the cooperation between scientists and practitioners, as evidenced to date, had been fruitful for both sides, and that the exchange of information on problems concerning increased efficiency in robot use would continue in the future.

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HUNGARY

### STRICT REQUIREMENTS FOR ENERGY MANAGEMENT DISCUSSED

Budapest FIGYEL0 in Hungarian No 5, 31 Jan 85 pp 1, 4

[Interview with Gyula Czipper, deputy minister and chief of the National Energy Management Authority, by reporter Istvan Garamvolgyi: "Energy Management, With Stricter Requirements"]

[Text] In the first three years of the 6th Five-Year Plan, energy management attracted attention primarily with the rationalization program's successful fulfillment. Last November, a few big industrial customers unexpectedly had to cut back their consumption of natural gas. The disturbances of brief duration in energy management and supply at that time were later revived by an unusual and very cold January. In the second and third weeks of January, about a dozen big industrial customers had to cut back their consumption of natural gas, and the exceptionally cold weather caused breakdowns in district heating that affected tens and thousands of apartments. On 8 January, there were disturbances in the supply of electricity as well. All this spoiled considerably the picture we formed in recent years of the situation in our fuel and power industry. Has its situation really changed? This was the first question we asked in our interview with Deputy Minister Gyula Czipper, chief of the National Energy Management Authority.

[Question] The minor and truly temporary cutbacks in November lead us to conclude that one of the causes of the January problems in energy supply dates back to 1984. How would you characterize the national economy's energy consumption last year?

[Answer] After stagnating for five years, energy consumption rose sharply. The national economy's energy consumption increased by about 3.5 percent in 1984, i.e., at a rate faster than the growth rate of national income.

[Question] To what can we attribute this radical change in the earlier trend of energy consumption?

[Answer] First, to the fact that also the rate and nature of economic growth were different in 1983 than in 1984. In 1983, there was hardly any growth of national income, industrial production was stagnating, particularly energy-intensive industrial output generally declined, and the demand for heating--it accounts for about 30 percent of the total energy consumption--declined as a result of mild weather. That year even the drought helped to reduce energy consumption: the moisture content of the smaller harvest was lower, and less energy was required for crop drying. The combined impact of all this on the fuel and power industry was that energy consumption dropped by 2 percent. In comparison with this, then, energy consumption increased by 3.5 percent in 1984. But last year also the economic processes developed differently: national income and industrial production rose by nearly 3 percent, and the farm output also was higher by 3 percent. Likewise essential is the fact that the export demand and opportunities resulted in above-average growth rates in the energy-intensive industries: aluminum metallurgy, the organic and inorganic chemical industries, and the production of manufactured fertilizer and plant protectants.

[Question] The different development of physical production last year partially explains the rise in energy consumption. Were there any changes in the other sectors, in the structure of energy consumption and use?

[Answer] I would start with the changes in the structure. Our participation in the construction of the Orenburg gas pipeline has nearly trebled since 1980 the import of natural gas, to 4.0 billion cubic meters a year. Together with the natural gas produced domestically, this has raised to more than 10 billion cubic meters a year the available volume of natural gas. For this very reason the 6th Five-Year Plan has set for itself the objective of expanding considerably the supply of households with natural gas. This development process has become more dynamic with each year. In the first half of last year, for example, household consumption of natural gas increased by more than 30 percent. Up to and including the most recent period, natural gas has been the only source of energy characterized by supply exceeding demand. Most probably this, too, is a contributing factor in that to date natural gas has replaced oil in about 80 percent of the conversions to different fuels. In the light of the peak demand and consumption in January, it seems that this structural change has proven to be excessive.

Another change, already linked to 1984, is the nearly 5-percent rise in electric power consumption. The consumption of electricity was rising even during total consumption's stagnation and 1983 decline, but only at an annual rate of about 3 percent. Last year, however, this growth rate nearly doubled. The consumption of electric power rose in every sector, including households, and this raised unrealistically also the national economy's total energy consumption in terms of heat. For in 1984 we obtained the additional electric power from nuclear energy, which for us is a new primary source of energy. But in the energy balance we calculate on the basis of the conventional power plants' fuel consumption the fuel requirement of the electricity that the nuclear power plant generates.

[Question] Will not the higher-than-planned energy consumption in 1984 jeopardize fulfillment of the tasks set by the 6th Five-Year Plan, and eventually also the tasks of the program for energy management and rationalization?

[Answer] The main task that the 6th Five-Year Plan set for energy management is to slow down the growth rate of the demand for energy, and to ensure the supply of the existing demand. The plan assigns a value of 0.7 to the indicator of energy flexibility: the additional energy necessary for a unit of increase in national income. The program for energy management has partially updated and partially tightened the requirements. For example, the 6th Five-Year Plan estimated that energy consumption in 1984 would be 1373 petajoules, whereas the program for energy management regards not quite 1300 petajoules as warranted and feasible. Energy consumption in 1984 was less than this.

[Question] And what is the estimate for 1985?

[Answer] We expect a 1.5-percent increase over the actual energy consumption in 1984.

[Question] This year we want to achieve the same rate of economic growth as in 1984. How can the much slower rise of energy consumption be reconciled with this objective?

[Answer] Consumption rose sharply last year over 1983, a very favorable "base year" from the viewpoint of energy management. Allow me to refer once again to the differences in the processes within physical production, to the changes in energy-intensity within industry. From our present viewpoint, 1984 is not a favorable "base": it contains the characteristics that have increased our energy consumption. On the one hand, we have not anticipated the intensification of the unfavorable factors. And on the other hand, we wish to step up the economizing role of energy rationalization.

In recent years, realization of the program for energy rationalization has been proceeding in two directions. On the one hand, energy has been saved by eliminating its wasteful use and partially through minor investments, e.g., to utilize waste heat and return water. On the other hand, a series of conversion projects has been undertaken to replace fuel oil with natural gas. In the energy rationalization competitions, the conditions for obtaining credit still give preference to energy conservation, whereas in the case of conversion projects we intend to focus attention in rationalization on the use of coal and new sources of energy--for example, biomass, geothermal energy, or pelletized forestry and farm wastes--and on saving electricity.

[Question] The program for energy rationalization sets as a general requirement an improvement in the efficiency of industrial and household equipment that converts or consumes energy. Are there any signs of such improvement?

[Answer] Yes, there are, in some areas. Industry now builds only transistorized TV sets whose power consumption is low. The Lehel refrigerators are excellent in this respect. Water heaters are being produced with additional insulation. And efficient, automatic coal-fired boilers have been designed in

Electric Power Generation, Production of Petroleum, Petroleum Products, Coal and Natural Gas

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Year	Electricity, million kWh	Petroleum	Gasoline	Diesel oil	Natural gas	Fuel oil	Coal	Fuel gas
1980	24 014	8 077	7 300	1 614	3 418	107	25 619	6 173
1981	23 914	8 078	7 238	1 647	3 407	106	25 569	6 147
1982	24 294	8 074	7 349	1 671	3 482	106	25 842	6 001
1983	24 093	8 077	7 268	1 576	3 402	109	26 424	6 041
1984	24 313	8 068	7 318	1 601	3 429	101	25 233	6 049
(11)								
1985 J-N	23 162	8 031	7 250	1 510	3 476	107	22 777	6 141
1985 A-N	198.8	100.3	100.1	100.2	99.8	101.8	101.7	101.8

\*Not including kerosene.

Source: STATISZTIKAI NAVI KOZLEMENYEK, No 12, 1984.

Key to table:

1. Year	7. Liquefied petroleum gas
2. Electricity, million kWh	8. Coal
3. Petroleum	9. Natural gas
4. Gasoline	10. Million cubic meters
5. Diesel oil	11. Jan-Nov
6. Fuel oil	

recent years. The general experience is that the electrical appliances built partially or predominantly for export are energy-efficient. Energy-consuming technological equipment could not be replaced in recent years with new and more modern equipment. The energy requirement of technological processes can and should be reduced only through process control and automation.

[Question] Up to now we have been discussing only one side of energy management: the consumption and use of energy. The fuel and power industry accounts for a substantial share of investment in industry. How have the domestic production and import of energy developed under the current five-year plan?

[Answer] Domestic coal production in 1981, 1982 and 1983 more or less exceeded 25 million tons a year, and even 26 million tons in 1982. Production dropped to 25 million tons in 1984, and we cannot expect more than that in 1985 either. And although coal import has increased in the second half of the plan period, the calorific value of the coal available to the national economy has declined somewhat.

The domestic production and import of natural gas have been developing in accordance with the plan. The combined volume of domestic production and import has increased from 10 billion cubic meters in 1981 to 11 billion cubic meters in 1984, and foreseeably this year we will exceed this level as well. Domestic petroleum production has maintained the planned 2.0-million-ton level, and import tallied with the contracted volume. The substitutions and conversions have reduced petroleum's role as our principal source of energy. Utilization of nuclear energy, with the startup of the two generating units at the Paks Nuclear Power Plant, is an event and result of outstanding significance in the fuel and power industry. The nuclear power plant generated 3.7 billion kWh of

electricity in 1984 and will generate 5.3 billion kWh in 1985. During the current plan period, the structure of energy sources and of their use has changed: the shares of coal and petroleum have declined, the share of natural gas has increased, and nuclear power has been added as a new source of energy.

[Question] Why do you attach outstanding importance to the commencement of nuclear power generation, not only from the viewpoint of the increase in electric power generation, but of the fuel and power industry's situation as well?

[Answer] It is clear at present how the sources of energy can be expected to develop through [year illegible]. We know that the external sources of energy --the imports of natural gas, petroleum and electricity--will be available through the end of this decade, in the volumes mutually reconciled earlier. We are also familiar with the possibilities for the expansion of domestic production: we cannot expect any significant increases in the outputs of coal, natural gas and petroleum. Only nuclear power can expand our primary sources of energy, by about 100 petajoules, with the operation of the four generating units in the power plant's first stage. Much will depend on whether we will be able in the coming years to stabilize the growth rate of electric power consumption at 3 percent. For in this case the nuclear power plant can provide the increase, and at the same time the load of the conventional power plants that are consuming 3.0 billion cubic meters of natural gas a year can be reduced, and a part of this natural gas will become available for use in other areas. This would give us some leeway in energy management, to continue the program to supply natural gas to households, on a more modest scale than previously.

[Question] About half of the 100 petajoules will be available already in 1985, in electric power generation at the Paks Nuclear Power Plant, and the remaining 50 petajoules will be available under the 7th Five-Year Plan. Whether we compare 100 or 50 petajoules to the national economy's total consumption of about 1,300 petajoules, the increase amounts to only a small percentage in either case, and only a part of the increase can be "converted" into natural gas. The fuel and power situation in the second half of this decade looks very tight and difficult. It seems to us that the energy-conserving rationalizations in themselves will not be enough to resolve the shortages and ensure uninterrupted energy supply. What is your opinion on this?

[Answer] The rate and extent of economic growth in the current five-year period will fall short of the plan. However, it is already certain that the energy-intensity of economic growth, as expressed by the indicator of energy elasticity, will decline significantly. The process of reducing, improving the energy-intensity cannot be terminated; we will need it under the next five-year plan as well. Consistent implementation of the program to save materials, and in general to reduce production's material-intensity, can likewise help to reduce the energy-intensity. It is an open question how well can a production policy that is advantageous from the viewpoint of energy be coordinated with other, no less important, national economic requirements. For example, with the foreign-market possibilities of achieving the additional export and surpluses necessary to strengthen our external economic equilibrium.

HUNGARY

BRIEFS

**ACCLIMATED SOYA**--By the end of the Seventh 5-Year Plan, soya will be grown on 70,000 hectares chiefly in Baranya, Bacs-Kiskun and Bokes counties. Three-quarters of the nation's arable land is concentrated in these southern counties. Despite the 1984 drought, they achieved soya yields of 1.7 tons per hectare. Yields in Transdanubia were much higher, amounting to a record 4 tons per hectare in one field. Although there were initially some problems, Hungary has succeeded in acclimating the soya seed which it has been importing. By 1990, the area planted to soya will double. [Summary] [Budapest MAGYAR HIRLAP in Hungarian 19 Feb 85 p 8]

CSO: 2500/1283

ROMANIA

MERCHANT FLEET DEVELOPMENT REVIEWED

East Berlin STEEWIRTSCHAFT in German Vol 16 No 12, Dec 84 pp 612-618

[Article by the authors collective of Wilhelm-Pieck-University in Rostock, Section Socialist Industrialism, and the Engineering Institute for Seafaring in Warnemuende/Wustrow: "Romania's Maritime Industry"]

[Text] General Politico-Economic and Geographic Survey

Romania's maritime industry could not develop to the benefit of the entire people until Romania removed the capitalist-feudal system and entered the road of socialist economic and social development. This road led to very rapid growth in all economic branches that form the foundation for a home-based, national maritime industry. This development is noteworthy, inasmuch as Romania was one of the poorest countries in Europe before the change-over to a socialist form of society, and it took until 1 Dec 1918, following centuries of struggles, to achieve its final national unity. The Socialist Republic of Romania, a state bordering on the Black Sea, has a population of 21.45 million who live in 40 counties and the municipality of Bucharest. Today it is a developed industrial state with an advanced agriculture. The foundations for this development were created in February 1948, when the Communist Party and the Socialist Party were combined into the United Romanian Labor Party (since 1965 it is known as the Romanian Communist Party), and in July 1948 with the adoption of the law pertaining to the nationalization of big industrial enterprises, mines, railroads, banks and insurance companies.

Romania's entire development, beginning with the people's revolution on 23 Sep 1944 and continuing until today, demonstrates that far-reaching economic and social changes have taken place in this country. Eighty years of capitalist development in Romania produced an underdeveloped industry and an obsolete agriculture. Even in 1938, the peak year of capitalist Romania, the national per-capita income was only one-fifteenth of the income of developed countries; approximately four-fifths of the working population was employed in agriculture and 95 percent of the machinery and engines that were required had to be imported. Industry's share in the production of the national income was only 30.8 percent. Up to 80 percent of the industrial capital and 57 percent of the bank capital was in foreign hands.

Today, as a result of the socialist industrialization policy, Romania has a diversified, modern industrial structure. The main center of industry is Bucharest. In addition to the traditional branches like petroleum and natural gas production and the food and luxury-item industry, the chemical industry, electrotechnology/electronics, metallurgy and the metal-working industry were developed. The variety of industrial products manufactured expanded continuously; especially after 1965 many new products were placed in production, among them, converter steel, rolling-mill products made of aluminum and aluminum alloys, water turbines, electronic calculators, electric locomotives, industrial robots, planes, numerically-controlled machine tools as well as hydro-aggregates of 178 megawatts and turbo-aggregates of 330 megawatts. The shipbuilding industry began to build deep-sea drilling platforms as well as oil tankers with a capability of 150,000 deadweight tons and ore freighters with a capacity of 55,000 deadweight tons.

Due to the socialist industrialization policy, 5 million new jobs were created between 1950 and 1980, 3 million of them after 1965.

In 1981, 7.4 million people out of 10.7 million workers were employed in non-agricultural industries, primarily in manufacturing.

The rapid development of the Romanian industry was only possible because of the high proportion of accumulation funds as a share of the national income. Between 1961 and 1965 the accumulation rate was 24.3 percent, between 1966 and 1970 it was 28.8 percent, between 1971 and 1975, 34.1 percent, and between 1976 and 1980, 36.6 percent. High growth rates have also been registered in the productivity of labor. During the last three decades, productivity in Romania's industry rose 9.2-fold; in the process, an annual rate of growth of 7.7 percent was achieved.

Romania's industrialization led to an increase in industrial production. Between 1950 and 1980 it increased 33-fold (cf table 1); electric energy production rose from 2.113 billion kWh in 1950 to 70.138 billion kWh in 1981. This rapid growth of Romania's industry led to the fact that its share of the national income is 60 percent today. Furthermore, the industrialization contributed to the fact that Romania's economic weakness when compared to other countries could be reduced through the rapid rate of growth. In 1979, the share of the Socialist Republic of Romania in global industrial production was 1.5 percent, while its share of the world population was 0.53 percent. As a producer of petroleum-producing equipment Romania is in third place and as a producer of motor vehicles is it one of the six largest producers in Europe.

During the last decade, intensive growth factors gained more and more in significance in Romania's economic development. Simultaneously, however, global economic problems, such as price increases for raw materials on the world market as well as the capitalist currency crisis, high interest rates and capitalist economic crises affected the economic development as well. The consequence, among other things, was the fact that the growth rate of the economic development for 1981 and 1982 was slightly below the annual average of the preceding Five-Year Plan, but it was still above the world average. To minimize the effects of the capitalist global economic crisis, a number of measures

were introduced--for instance, an accelerated transition to a more comprehensive intensification of production and greater efficiency as well as a radical improvement in export products. The emphasis is on the guarantee of energetic independence of the country through concentration on domestic energy and raw material reserves.

An important starting point of Romania's industrial development is the existence of raw materials. In addition to petroleum and natural gas reserves, Romania has deposits of hard coal and brown coal, iron and nonferrous metal ores (manganese, uranium, chrome, copper, lead, zinc, bauxite, silver, gold) as well as salt, sulphur and mercury. The center of petroleum production is the area around Ploiesti, Pitesti and Moisesci. Natural gas is produced in Translyvania and south of Ploiesti. In this area, Romania is one of the leading countries in the world. When it comes to coal mining, many new mining areas have been opened during the last decade. Between 1950 and 1981 coal production rose 11-fold. During the current Five-Year-Plan (1981-1985), the emphasis is on a forced expansion of domestic raw materials. For instance, capacities are to be put into operation for the production of a total of 20 million tons of various ores. With respect to the increase in the energy base of the country, plans are under consideration for the construction of additional hydroelectric plants--among them also a number of smaller ones--thermoelectric plants using coal and oil shale and the construction of a nuclear-energy plant.

Nevertheless, drastic structural changes did not only take place in the industry but also in the agriculture of the country. Following the implementation of the 1945 land reform (expropriation of large landowners of more than 50 hectares), the socialist reorganization of agriculture was carried out between 1949 and 1952. In 1978, the state sector of the land amounted to approximately 50 percent, the cooperative sector 66 percent and the individual sector 9.4 percent. Sixty-three percent of the territory is intended for agricultural purposes, 66 percent of which is used for planting crops and 31 percent is used for meadows and grazing areas. In 1977, so-called industrial councils were created to improve the management and organization of agriculture. The main crops are corn, wheat, sugar beets, sunflowers, potatoes, fruit and wine. Animal husbandry is oriented toward the raising of cattle, pigs, sheep and fowl. Since approximately 35 percent of the agricultural land is in constant danger of erosion, the Central Committee of the Romanian Communist Party and the Great National Assembly established a comprehensive program for the transformation of nature, the fight against soil erosion and an expansion of irrigation, since two-thirds of the arable soil is located in areas of low precipitation. In 1965 approximately 230,000 hectares of cropland were irrigated, by the end of 1985 it is supposed to be at least 4 million hectares. Romania is one of the richest countries in Europe when it comes to forests; 27 percent of its area is covered with woods.

Romania's industrial and agricultural boom did not only lead to an increase in foreign trade but also to qualitative structural changes in exports and imports. Romania maintains trade relations with approximately 140 countries. The trade agreements with more than one-third of them are of a long-term nature. At the beginning of the 1980's, CEMA countries amounted to 58 percent of Romania's foreign trade, the capitalist industrial states were represented with 37 percent and the developing countries with 18 percent. The most important trade

partners are the USSR, the DFR, the CSSR, the FRG, the United States and the People's Republic of China. In 1981, the Romanian-Soviet foreign-trade volume was approximately 3.4 billion rubles compared to 1.5 billion rubles in 1975. There were also favorable developments in the international exchange of goods with other CEMA countries (table 7). Romania's trade with the developing countries has also been expanded considerably since 1965. Romania participates in more than 130 economic and social projects in these countries. There has also been a rapid expansion in foreign trade between Romania and the USA; in 1981 the volume of foreign trade increased 18-fold when compared to 1970.

Important export items shipped from Romania are machine tools, petroleum equipment (ranked second in the world), butters, petroleum and agricultural products, industrial consumer goods, chemicals, cement and fertilizers. Imported goods consist of electrotechnical, energetic and metallurgical equipment, chemical installations, textile machines, petroleum, iron ore, coal, rolled steel, pharmaceutical products and cotton.

The socialist industrialization, the establishment of new industrial sites, the boom in agriculture and the expansion of foreign trade made necessary the expansion and modernization of Romania's transportation system. In 1980, the transportation of goods (tons per kilometer) was distributed as follows: railroads 43.1 percent, highways 6.7 percent, inland-waterway shipping 1.3 percent, ocean shipping 45.0 percent and pipelines 3.0 percent. The most important inland waterway is the Danube, which is navigable for ocean-going ships as far as Braila. In this connection, the opening of the Danube-Black-Sea Canal is of considerable economic significance.

The canal is to be used to transport about 75 million tons of freight annually. Furthermore, it will guarantee the irrigation of approximately 220,000 hectares of crop and grazing lands that are in danger of turning arid.

Romania's merchant fleet was able to increase the transportation of goods by sea from 1.3 million tons in 1960 to 16.3 million tons in 1981. Accordingly it ranks in fourth position among the CEMA countries (table 8).

#### Merchant Fleet

Among the socialist states of CEMA, Romania has the third-largest merchant fleet after the USSR and Poland. The rapid growth of the Romanian merchant fleet began with the 1971-1973 five-year-plan and the accompanying rise in foreign trade transported by sea. At the present time Romania's merchant fleet has 237 ships. It is run by the Romanian shipping company Navrom, has a capability of more than 3.3 million tons and is in 29th place among the shipping countries in the world. During the last few years, primarily modern price-goods freighters and bulk carriers have been constructed. In 1977 the "Independenta," a 150,000 dead-weight-ton tanker built in a Romanian shipyard, was launched by the Navrom shipping company.

The development of the Romanian merchant fleet between 1960 and 1983 is presented in table 8 and the development of the structure of the merchant fleet in table 9. The largest number of ships are ore and bulk carriers, more than half of which are less than 10 years old (table 9).

the volume of goods transported by the sea or seaway fleet rose faster than the fleet in the inland river and in the lakes. In spite of the considerable increase in the amount of freight traffic, it is still dependent on relatively little for the transport of the more valuable metals of goods, whereas the shipping policy is stipulating a more direct share by expanding the northern fleet and advancing the northern routes of goods in cross trade with the trans-Siberian fleet.

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Agathocles' 1500 kilometer from the coast's  
subtropical forest belt.  
conveyed to the shadow of the peninsula's  
natural setting in the city's architecture. In  
the 16th century, the fortresses were partially  
abandoned when the capital of the empire was founded.

ably the other tributaries, which had begun to form a universal seaport, in a wider range, under the system of portage roads. The amount of trade handled by current or some such means, is not known, however, upon the frontier of the state, and the same is the case in the interior. The latter it is supposed to make a specialty of agricultural products. In addition to many pieces of leading others, the gatherers are engaged in the export of petroleum and cattle exports, the leading of lumber, and, to a small extent, of seeds and wood.

Constituted by the author of the original  
"The Merchant of Venice" and the  
"Twelfth Night" and "Much Ado About Nothing".  
"Twelfth Night" and "Much Ado About Nothing".

In the region of the mouth  
of the right tributaries (under normal  
conditions) situated harbor of Braila,  
these concentrations are on the  
order of 1000 mg/l (the depth of the  
water 10-15 m) and the concentrations of organic

water up the river. The industrial complex in the reported area coal and iron deposits inland-waterway shipping, and deck for passenger and freight (5,000-ton size) are the characteristics. The water level is 10 feet (3 meters).

Approximately 60 kilometers from the mouth, on the southern shore of the river, is the harbor of Tulcea, primarily equipped as an inland port and for the fishing industry. For the alumina combine which was constructed at this site, the loading and transfer of raw materials is important.

The harbor of Sulina on the mouth of the Danube is only of regional significance; it is primarily used as a waiting area for Danube ships. In the Sfintu-Gheorghe arm of the southern part of the mouth of the river, a new inland harbor was built near the limestone quarry of Mahmudia.

The opening of the Danube-Black Sea Canal is of great importance for Romania's economy, especially for the seaport of Constanta. In 1973, the Central Committee of the Communist Party of Romania decided to realize the old idea of building an inland waterway connection between Cernavoda and the coast. This project became one of the largest construction projects in Romania. It took 9 years to build the 64-kilometer canal which begins at the Danube near Cernavoda, touching Medgidia and Bessarabia and flows into the Black Sea near Agigea, to be exact, it ends at the new southern port of the harbor complex of Constanta. The canal shortens the trip to the Black Sea by approximately 400 kilometers, in other words, it reduces the sailing time from 2 days to 5 hours, which means that the harbor of Constanta provides the most important inland waterway connection. As a result, transportation expenses are substantially reduced and the use of inland ships is more energy-efficient and cost-effective. The canal is between 7 and 7.5 meters deep, between 70 and 90 meters wide and has a bridge clearance of 17 meters. A group of vessels (296 meters in length) consisting of six barges with a capacity of 3,000 tons each can be accommodated. In addition, sea-going inland ships up to 5,000 deadweight tons can pass the canal at low speed. At both ends of the canal are two double-locks. Those placed at Agigea have special equipment to protect the canal from the infiltration of saltwater. When the canal was excavated, 300 million cubic meters of soil had to be moved and 3.5 million cubic meters of cement had to be poured. The amount of soil that had to be moved was larger than for the construction of any other sea canal. Some of the soil was transported to the coast on 4,000 trucks and through a 17-kilometer automatic moving system, and it was used to shore up the pier installations of the southern harbor. The canal traffic will receive substantial impulses following the completion of the Rhine-Main-Danube canal. The 1,800-kilometer inland waterway from the North Sea to the Black Sea could be covered by inland ships within 5 and 1/2 days.

#### Fishing Industry

Romania's fishing industry has developed in a dynamic manner. Within 5 years, between 1971 and 1975, fish catches could be doubled, and ocean fishing is largely responsible for it. This increase was possible through the use of a modern fishing fleet. A decline in catches, which had resulted from the introduction of 200-sea-mile zones, could be made up in other ways. Fish catches peaked in 1981, when they amounted to 190,000 tons. Catches for 1982 and the preceding years came to approximately 175,000 tons.

Inland fishing yields an annual catch of more than 50,000 tons; as a result it constitutes a significant share of the total catch and serves as a stabilizing factor (table 8).

The average annual rate of growth for ocean fishing was 14 percent, considerably higher than the rate for inland fishing, which was only 5 percent. The use of larger types of vessels, an increase in the variety of fish caught and the development of fish hatcheries were important factors in the growth of the Romanian fishing industry and it will remain so also in the future.

Inland fishing takes place primarily in the fresh and brackish waters of the Danube Delta with more than 9,000 square kilometers of water surface and in the lagoons along the coast. Carp is the major variety of the catch, amounting to more than 30 percent. Above all, it can be attributed to intensive fish breeding. Romania has begun to establish fish farms. Sea creatures are bred under natural conditions in the shallows of Chituc and the lagoon of Sinoe. Every day, approximately 5,000 tons of sea trout and 1,000 tons of sturgeon as well as oysters, mussels and shrimp are to be hatched in this area. Construction has begun of a series of fish farms in the marshes of the coastal areas. In general, Romania can look back on long traditions in fish hatching.

Ocean fishing is known for its mackerel fishing industry, which represents 80 percent of the total catch. In addition, sardine and anchovies fishing must be mentioned. Table 9 presents an overview over the main catch areas between 1977 and 1981. Atlantic fishing dominates; it provides approximately two-thirds of the catch. ATLANTIK, a Romanian-Mauritanian enterprise which used between five and seven trawlers, is the basis for fishing on the coast of Mauritania. Cooperation with Icelandic and English fishermen guarantees catches in Iceland's and Great Britain's waters. A reciprocal fishing agreement exists with the United States, but the available quotas were too low to make fishing economically feasible.

The guarantee of a raw material basis through economic agreements is a task of primary importance for the Romanian fishing industry--as is the case for all countries that fish in distant waters. With this in mind, negotiations are in progress with Morocco, Angola, Peru and Canada. The Black Sea fishing industry represents only 5 percent of the catch; nevertheless, compared to the period between 1960 and 1970 catches in the Black Sea have been doubled.

Romania's ocean-fishing industry is definitely a long-distance fishing industry which is also reflected in the structure of the fleet, because only two ships in the fleet are smaller than 2,000 gross register tons. In 1982, Romania had a fleet of 34 fishing vessels (over 100 gross register tons) with 120,524 gross register tons and nine transportation and factory ships with 75,930 gross register tons. Eight "Atlantik" trawlers and five "Atlantik" super-trawlers were purchased from the GDR.

Romania's fish catches are primarily for human consumption. The ocean-fishing industry brings in primarily frozen fish, which continues to be processed on land. In 1981, the amount of frozen fish brought to shore was 122,000 tons, which is 39 percent of the total catch. Table 10 shows how much fish is imported for various types of fish processing for 1977, 1979 and 1981. A decline in frozen production is made up through an increase in the production of salted and pickled fish. Romania also imports 70,700 tons of fish products annually; this amount alone accounts for approximately 30,000 tons.

The main fishing site of the Romanian fishing industry is Tulcea, situated at the beginning of the Danube delta. It is also the home of the deep-sea fishing fleet. Fish processing plants, among others, in Tulcea, Braila, Botosane and Cluj are administered by the production association for fish processing in Bucharest. In Constanta there is an Institute for Ocean Research, which primarily investigates the raw material basis. For many years the fishing industries of the GDR and of Romania have been working together within the framework of a bilateral agreement between Romania and the GDR as well as the six-way agreement on fishing between socialist states. The exchange of information pertains primarily to results of fish-catching expeditions and findings of technological research.

#### Shipbuilding

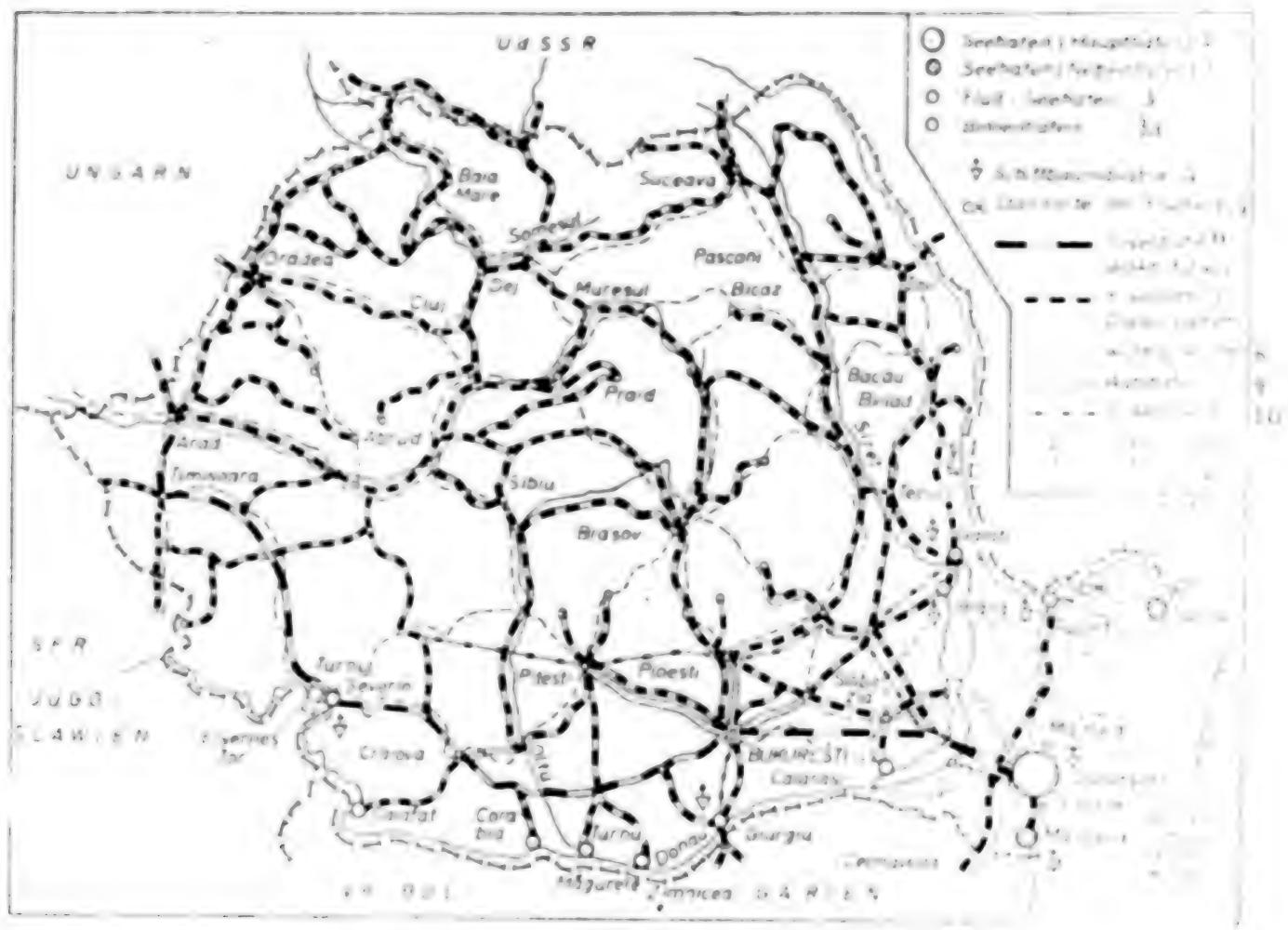
The Romanian shipbuilding industry, among other things, consists of 8 large shipyards, suppliers and other dependent industries and a research center. The largest Romanian deep-sea shipyard is in Constanta. A second deep-sea shipyard was built during the 1970's in Mangalia. The sites of the six inland shipyards on the Danube are Galati, Braila, Drobeta Turnu-Severin, Oltenita, Giurgiu and Tulcea. The production program of the shipyards and their capacities are presented in table 11, production volume and orders on hand in tables 12 and 13. Due to the location of the inland shipyards, the proportion of large ships as a share of the total production program is relatively small. In 1983, only 18 ships were bigger than 2,000 deadweight tons. During the last few years Romania's share of the global shipbuilding production was between 2 and 3 percent.

Additional shipbuilding capacities for smaller vessels and for ship repairs can be found on the Danube and on the Black Sea in Orsova, Calarasi, Giurgiu, Galati, Sulina, Constanta, Zimnicea, Hirsova and Midia. On the basis of its geographic location on the Black Sea and on the Danube, Romania can point to a long tradition in shipbuilding. Giurgiu, for instance, has been an important shipbuilding center for 150 years.

Today the shipbuilding industry has become an important export branch of the country. The biggest customers of the Romanian shipbuilding industry are the shipping companies of the USSR.

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Map: Locations of maritime industry and important transportation routes in Romania

**Key:**

1. Seaports (major ports)	6. Railroad (electrified)
2. Seaports (minor ports)	7. Railroad (diesel/steam)
3. River Seaports	8. Important roads
4. Inland port	9. Highways
5. Shipbuilding industry	10. Oil pipeline

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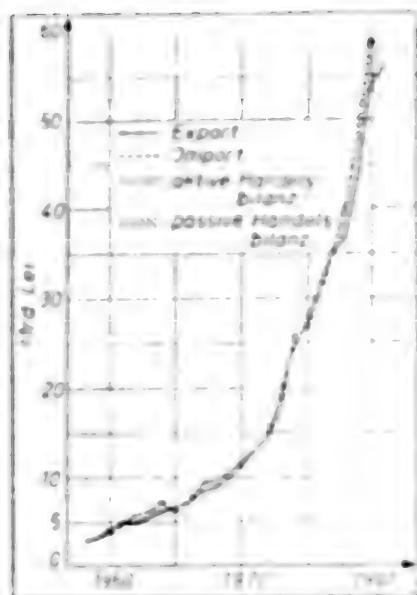
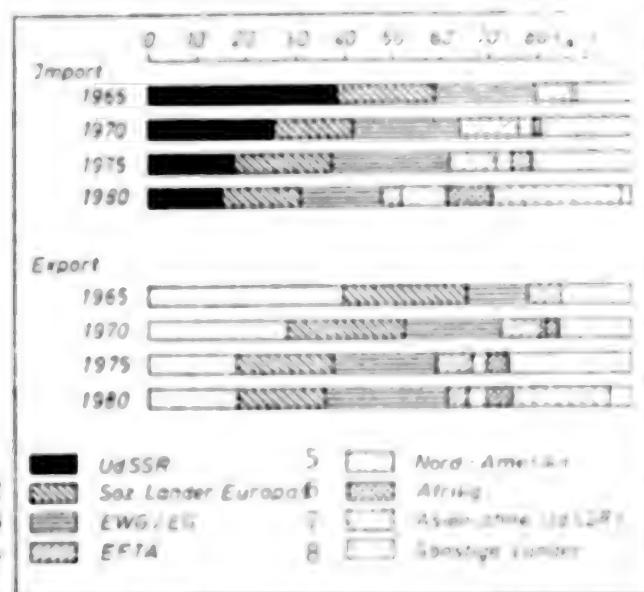


Chart: Development of Romania's foreign trade between 1958 and 1981

Key:

1. Export
2. Import
3. Positive trade balance
4. Negative trade balance

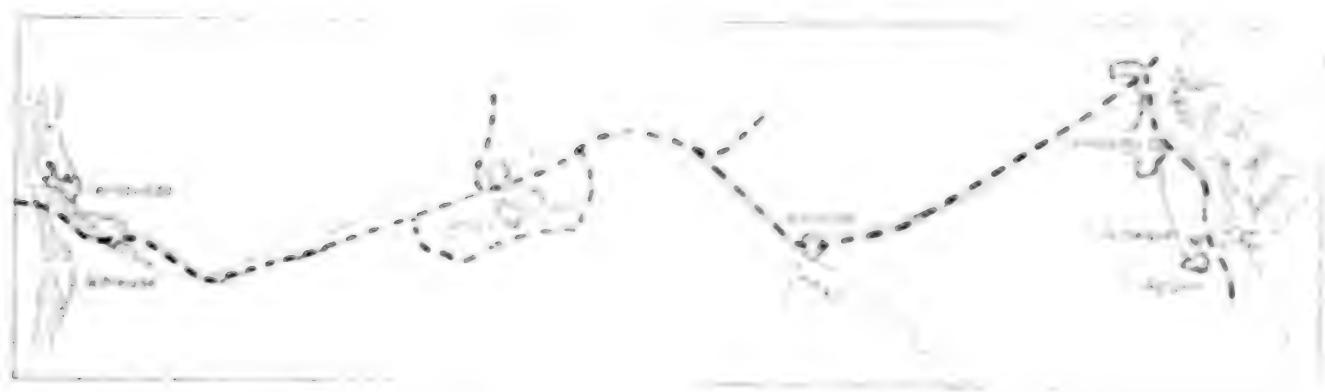


Graph: Regional structure of Romanian foreign trade (Basis: U.S.-\$)

Note: Photos 2 and 3 were put together from data obtained from the "Yearbook of International Trade Statistics," New York, several volumes.

Key:

1. USSR
2. Socialist countries in Europe
3. European Economic Community/European Communities
4. EFTA
5. North America
6. Africa
7. Asia (without USSR)
8. Other countries



Graph: Dijksstra algorithm (Canal and Thirteen bridges)  
With south Nuffic project

Key: Schleuse = Lock

Table 1. Economic Data on Romania

Item		1970	1975	1979	1980	1981
Gross national product	1950=100	629	10-fold			15-fold
National Income	1950=100	199	10-fold			15-fold
	1970=100	16.3	1.2	235	261	
Industrial production	1950=100	11-fold	21-fold		33-fold	35-fold
	1970=100	100	184	272	290	
	In % of prec. yr	12.1	12.4	8.2	6.5	
Agricultural production	1950=100	212	289			346
Foreign trade volume	1950=100	8.6	19-fold			41-fold
Foreign trade turnover	billion rubles	3.4	8.0	13.8	16.9	
--CEMA countries	" "	1.7	3.0	4.9	5.8	
--Export	" "	0.840	1.541	2.380	2.997	
--Import	" "	0.852	1.479	2.514	2.766	
Investments						
National economy	billion lei	80.0	137.7	203.4	210.5	
Electro- and thermo- energy products	1970=100	107	159	196	200	
Chemical, rubber and asbestos industry	1970=100	100	107	107	127	
Building material indus.	1970=100	100	162	181	206	
Textile industry	1970=100	100	178	210	295	
Food industry	1970=100	100	143	190	192	
Natural steel production	million tons	6.3	7.5	12.9	13.2	
Rolled steel production	million tons	4.5	6.8	9.5	9.3	
Petroleum production	million tons	1.1	14.6	12.3	11.5	
Natural gas production	billion m <sup>3</sup>	1.3	21.6	32.3	33.3	
Brown coal production (net)	million tons	13.1	19.8	24.7	27.1	
Grains and legumes	10 <sup>3</sup>	19,860	15,117	19,574	20,304	

Source: *Laender der Erde* [Countries of the World], Berlin, 1980; *Statistisches Jahrbuch der DDR* [Statistical Yearbook of the GDR], Berlin, 1982; *Jahrbuch fuer Internationale Politik und Wirtschaft* [Yearbook for International Politics and Economics] 1982, Berlin, 1982; *Rumänien heute* [Romania Today], Bucharest, vol. 1983.

Table 2. Growth in Exchange of Goods Between Romania and CEMA Countries and Yugoslavia between 1976 and 1980 (1971-1975=100)

Country	Amount
Bulgaria	225.0
GDR	220.0
Cuba	116.9
Mongolia	143.2
Poland	209.6
CSSR	178.8
USSR	183.7
Hungary	241.8
Vietnam	414.0
Yugoslavia	167.9

Source: Der Aussenhandel der UdSSR [Foreign Trade of the USSR], Moscow, No 4, 1982.

Table 3. Goods Transported by Shipping Companies of CEMA Countries (in million tons)

Country	1965	1970	1975	1980	1985
USSR	119.3	161.9	200.0	228.3	223.2
Poland	11.6	17.6	30.2	39.6	32.0
Bulgaria	3.4	4.5	19.3	25.7	27.0
Romania	1.4	4.5	6.5	16.2	16.3
GDR	6.1	8.5	11.2	12.6	12.5
Cuba	0.4	6.7	9.5	10.5	9.5
CSSR	0.2	0.9	1.2	1.7	1.5
Vietnam			1.5	1.3	1.1
Hungary	0.2	0.4	0.3	0.8	0.8
CEMA Countries	141	208	275	336	315

Source: Statistisches Jahrbuch der DDR [Statistical Yearbook of the GDR], 1983, Staatsverlag, Berlin, 1983.

Table 4. Development of the Romanian Merchant Fleet Between 1960 and 1983  
(as of 1 January of each year, units over 300 gross register tons)

Year	Ship num- ber	Ship Total Gross register tons	Dead register tons	Increase in gross register tons (%)	Num- ber	Tankers Gross register tons	Dead weight tons	Increase in gross register tons (%)
1960	14	41,618	51,500	-	-			-
1965	28	84,808	116,135	-	1	12,252	19,020	-
1970	56	345,418	511,624	100	4	59,558	95,875	100
1975	85	627,530	946,296	182	6	188,197	331,474	314
1980	183	1,573,289	2,400,576	455	10	334,785	587,116	558
1981	199	1,692,027	2,576,055	490	10	334,785	587,116	558
1982	217	1,811,488	2,752,068	524	12	340,315	594,314	568
1983	237	2,142,976	3,315,238	620	12	472,399	849,761	788

(Based on data by the Institute for Maritime Trade, Bremen).

Table 5. Structure of the Romanian Merchant Fleet Between 1982 and 1983  
(Units Over 100 Gross Register Tons).

Type of ship	Number		Measurement (10 <sup>3</sup> gross register tons)		Average ship size (gross register tons)		Share of total fleet on basis of gross register tons (%)	
	1982	1983	1982	1983	1982	1983	1982	1983
Tanker	11	10	383.7	295.4	34880	29540	19.5	13.8
Ore and bulk carrier	47	51	871.9	1023.8	21780	20075	44.3	47.8
Pier-goods freighter	164	178	701.1	808.1	4930	4540	35.6	37.8
Animal transporter	3	3	13.0	13.0	4330	4330	0.6	0.6

Source: Lloyd's Register of Shipping, Statistical tables 1983

Table 6. Age and Size Structure of Romanian Bulk Carrier Fleet (1981)

Size Group	Age of Ships in years							
	0 - 4		5 - 9		10 - 14		15 - 19	
Number	Gross register tons	Number	Gross register tons	Number	Gross register tons	Number	Gross register tons	
8,000- 9,999	-	-	4	38,228	5	47,785	1	9,557
10,000-14,999	-	-	8	83,002	-	-	-	-
15,000-19,999	-	-	7	110,992	-	-	8	132,858
20,000-29,999	-	-	-	-	-	-	-	-
30,000-39,999	8	280,326	10	321,000	-	-	-	-
Total	8	280,326	29	553,282	5	47,785	9	142,415

Source: Lloyd's Register of Shipping, Statistical tables 1983

Table 7. Transportation Volume and Capabilities of the Romanian Merchant Fleet between 1960 and 1980

Year	Transportation Volume		Transportation Capabilities	
	Million tons	Increase (%)	Million tons per km	Increase (%)
1960	0.2	-	1,065	-
1970	4.4	100	37,490	100
1975	6.5	148	66,280	177
1976	7.3	168	63,456	169
1977	8.4	193	62,304	166
1978	10.3	237	60,090	161
1979	13.2	303	72,280	193
1980	16.2	371	80,464	214

Source: Statistisches Jahrbuch der RGW-Mitgliedsstaender (Statistical Yearbook of CEMA Member States), Moscow, 1981.

Table 8. Romania's Fish Catches in  $10^3$  tons

Year	Total	Ocean fishing	Inland fishing
1971	67,800	36,600	31,200
1975	136,624	89,866	46,758
1977	150,701	95,848	54,853
1978	137,676	91,755	45,921
1979	179,087	129,501	49,586
1980	173,598	120,864	52,734
1981	192,013	136,648	55,965

Table 9. Main Catch Areas of Romania's Fishing Industry

Area	1977		1981	
	Amount of catch ( $10^3$ tons)	%	Amount of catch ( $10^3$ tons)	%
Inland	54,853	36.4	55,365	28.8
Northwest Atlantic	5,432	3.6	-	-
Atlantic East-Central	78,431	52.0	85,567	44.6
Atlantic Southeast	5,843	3.9	41,084	21.4
Black Sea	6,142	4.1	9,997	5.2
Total catch	150,701	100.0	192,013	100.0

Table 10. Fish Processing, Net Amount in  $10^3$  Tons (Main Varieties)

Assortment	1977	1979	1981
Fresh fish processed and frozen	57.5	76.8	98.9
Fish smoked, salted	5.4	12.8	26.1
Fish: cans, preserves	25.6	23.3	18.9
Fish meal, fish oil	8.2	11.8	11.3

Source: Tables 8-10: Yearbook of Fishery Statistics, United Nations, Rome.

Table 11. Overview Over the Most Important Shipyards in the Socialist Republic of Romania and Their Production Program

Shipyard	<u>Site on Development of shipyard and on capacities</u>	In production program, among other things
Galati	<ul style="list-style-type: none"> <li>--founded in 1893, between 1893 and 1944, 127 small vessels were built</li> <li>--in 1965 production of ore freighters with 12,500 deadweight tons began, 1976 saw the production of the first self-rising drilling island and 1977 the first 55,000 deadweight ore freighter.</li> <li>--portal cranes, able to lift 15 to 50 tons, overhead cranes able to lift 150 tons, bock cranes able to lift 320 tons</li> <li>--universal deep loader for assembly of volume sections weighing up to 120 tons</li> <li>--dry docks for ships up to 55,000 deadweight tons</li> </ul>	<p>Piece-goods freighters, bulk-goods freighters up to 55,000 deadweight tons, drilling islands (first drilling island, "Gloria," completed in 1976, 70 meters long, 40 meters wide. Total volume 10,000 tons, drilling at water depth up to 90 meters and to 6,000 meters below the bottom of the sea).</p>
Constanta	<ul style="list-style-type: none"> <li>--trestle and portal crane with large carrying capacity (see above)</li> <li>--two dry docks, 360 meters long and 58 meters wide</li> <li>--two floating docks of 15,000 tons and 8,000 tons respectively</li> </ul>	<p>Tankers up to 150,000 deadweight tons, mass-goods freighters--to date 26 deep-sea ships with tonnage of 1.8 million deadweight tons have been launched</p> <p>ship repairs</p>
Braila	<ul style="list-style-type: none"> <li>--hydraulic transportation platform with ability to carry 120 tons</li> <li>--shipway installations where 12 ships can be built or repaired in parallel</li> </ul>	<p>New construction and repair of inland and ocean-going ships, equipment for small bulk-goods freighters between 5,000 and 9,000 deadweight tons, production of small supply ships for drilling platforms, fishing vessels, research ships</p>
Drobeta Turnu Severin	<ul style="list-style-type: none"> <li>--built 120 years ago</li> <li>--sections of 100 tons maximum</li> <li>--launching volume up to 2,500 tons</li> <li>--one shipway for launching</li> </ul>	<p>Inland waterway tugboats and barges with 1,000 to 3,000 deadweight tons, dredges, lighters (600 m<sup>3</sup>) with automatic starters, coastal tankers up to 7,000 deadweight tons, mass-goods freighters with 2,400 deadweight tons</p>

Oltenia	--work area of the shipway on the Danube 800 to 900 meters --shipway equipped with powerful metal cars --fabrication of sections with 15-ton and 35-ton volume --6 ships approximately 150 meters long and 20 meters wide can be built in parallel	Inland and ocean-going ships for transportation and technical ships, for instance, inland and coastal passenger ships, multi-purpose freighters of 2,400 deadweight tons, motorized inland ships with 2,000 and 5,000 deadweight tons, ladder dredges 750 m <sup>3</sup> /h, suction dredges 3,500 m <sup>3</sup> /h, sea and river tug-boats
Giurgiu	--founded 150 years ago --lowering facility of 900 tons --mechanical shipway for repair of ships up to 70 meters long and a maximum load of 8t/m <sup>2</sup>	Building, equipment and repair shipyard for riverboats, passenger ships, sleeping pontoons, launches, floating cranes, push-tugs, pilot boats, fire-extinguishing ships, lighters
Tulcea	--ship-raising facility, type "Synchrolift"--one of the largest facilities in the world --large assembly hall, in which construction, assembly and equipment of a ship can be done independent of the weather --one repair shipway	New construction and repair of ships, for instance, deep-sea trawlers, refrigeration ships sea platforms
Mangalia	--this modern shipyard was built at the beginning of the 1970's --first launch in 1976 (a 55,000-deadweight-ton ore freighter)	New construction and repair of ships, for instance, bulk-goods freighters up to 65,000 dead-weight tons

Source: Die Schiffbauindustrie der SSR [The Shipbuilding Industry of the Socialist Republic of Romania], edited by Publicom, Advertising Agency for Foreign Trade.

Table 12. Shipbuilding Production of the Socialist Republic of Romania  
(Ships With 2,000 Deadweight Tons or More)

Item	1982	1983
Number	23	18
Deadweight tons	928,900	536,740
Kilowatts	228,390	150,530
Share of global production (%)	3.3	2.3

Source: The Motor Ship, No 2, 1984, p 71

Table 13. Ship Orders on Hand in the Socialist Republic of Romania  
(Ships with 2,000 Deadweight Tons or More)

Item	1982	1983	1984
Number	44	43	40
Deadweight tons	1,807,500	1,790,900	1,638,600
Kilowatts	417,910	407,610	337,460
Share of global orders on hand (%)	1.07	1.2	0.67

Source: Shipping Statistics, Institut fuer Seeverkehrswirtschaft, Bremen

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YUGOSLAVIA

ECONOMIST SAVIN OUTLINES FUTURE ECONOMIC PROBLEMS

Belgrade EKONOMSKA POLITIKA in Serbo-Croatian 21 Jan 85 pp 17-21

[Interview with Dr Davor Savin by Milos Markovic: "Even Without Changes--Changes"; date and place not specified]

[Text] Essential changes in the economic system are being put off indefinitely, the piecemeal solutions, unaccompanied, are yielding results which are even adverse, and formulas which have long been familiar and have several times been applied unsuccessfully before now in a somewhat different form are being offered as radical changes of direction. Of the operationalization of the stabilization program there by and large remain only official assurances that a particular measure is "in the spirit of recognition of the market and operation of economic laws" or the continual procrastination is justified in terms of the "complexity of the problems." That complexity, when translated, mostly means unwillingness and inability to overcome regional, ideological and all other kinds of resistance. The country's external liquidity is at the same time becoming an almost constant limitation with which the domestic economy is entering each new year. Are there steps which could be taken regardless of all the limitations we have mentioned that would yield results even given the kind of systemic environment and would in the future even facilitate future changes, for which, it is certain and we should emphasize it, there is no and can be no substitution? This is the topic on which our reporter Milos Markovic talked with Dr Davor Savin.

EKONOMSKA POLITIKA: It would be good, first of all, for you to define the situation in which the domestic economy finds itself at the moment, that is, the base from which (but also because of which) changes are being undertaken.

Dr Davor Savin: Over this decade Yugoslavia will have to commit about \$3 billion of foreign credit every year if, with a constant surplus in its balance of payments, it is to promptly settle repayments of principle and payments of interest as they come due. Achieving a surplus in the balance of payments from about \$1 billion to \$1.5 billion turns exports into an exogenous category of economic policy. That is, the fact that sales on the convertible market have to increase year after year at a rate between 15 and 20 percent means that other goals have to be subordinated to that. By contrast with the late seventies, when aggregate consumption was 7-9 percent greater than the social product, and the difference was made up with foreign loans,

in this year and coming years domestic consumption will have to be smaller than the value of the social product achieved, since the difference will have to be assigned to paying off principal and interest. From the standpoint of the time we have available to us for the planned stabilization, the essence of our problem is that the economic system and the economic structure that is in place do not afford that kind of growth of total output (or at a price) that would guarantee that foreign obligations are promptly discharged and the standard of living would rise at the same time. That is why a lag is inevitable.

The slowing down of the rate of consumption will mostly affect investments. I would like to stress on this occasion that I regard the reduction of investments in fixed capital as the greatest difficulty which the discounting of future time argues for us. Investments in fixed capital have been dropping off for 5 years now. Aside from narrowing the space for creation of new jobs, this undermines the foundation for economic growth in coming years. Only in the 1987-1990 period will we begin to feel the effects of the inadequate development of productive capital. In the meantime they will be arising sporadically, but still sufficiently evidently to confirm what present tendencies are making evident to us.

I would like especially to emphasize that the technological lag of the Yugoslav economy signifies a slower growth of labor productivity, and that, in a situation where exports are an exogenous parameter of economic policy, signifies that the rate of exchange of the dinar has to slide down and in future years to bridge the gap between Yugoslav prices and the prices of our partners in foreign trade.

It is proving to be necessary to turn these trends around as soon as possible if we are to escape the adverse consequences we are threatened with. The first necessity I see in this context is for changes in the economic system that will equip it to support and stimulate a new surge of the Yugoslav economy. Just imagine what our chances would be if at least in part we went back to the growth rates of output that we had when--together with Japan--we headed the world list with respect to the pace of economic growth.

EKONOMSKA POLITIKA: In what activities are the chances greatest in the short run?

Savin: Change and equipping the economy for more efficient conduct of economic activity require two important resources, and we lack both: time and resources. I am therefore convinced that additional production can be set in motion by relying on activities where our comparative advantages are high, our resources abundant, and the elasticity coefficient of imports lower than for the average of the entire economy and far below unity. These are, first of all, agriculture, and then housing construction, small business and tourism.

It is not sensible to suffer the present difficulties in economic life and not take advantage of available resources which can be set in motion immediately if the moves of economic policy are just a bit better coordinated. The

stabilization we are carrying out is based on a concept which might be called "a model of retaining the present economic structure," and it, as I have mentioned, can function only with a particular rise of prices. I think that in the short run, under the present conditions of consensus concerning every change, even the slightest, in the measures of economic policy or the economic system, and assuming the present features in it are retained, Yugoslavia does not have an opportunity to alter the situation to any appreciable extent. At the same time unemployment is more and more rapidly moving out of the zone of a purely economic phenomenon and crossing over into the zone of social welfare and politics. Human dignity and happiness are incompatible with a lack of employment, especially since society has not eliminated the horror of financial insecurity and the fear of poverty. I am therefore convinced that basing the growth of the social product more than up to now on those activities which have been neglected and on those factors of production which have not been taken advantage of could speed up the pace of production and the rate of employment directly and with multiplier effects, and--most important, this would be done in a very short period of time. We are talking about activities on whose development basic positions have already been taken, and the orientation has been defined.

**EKONOMSKA POLITIKA:** The growth of employment, then, would be a consequence rather than a means of some sort of growth of production for a primary goal, and that kind of treatment has up to now been fateful for productivity.

Savin: The long-term lag of labor productivity--even when it is quite small--gives rise to large cumulative effects in subsequent development. Economic history offers those who turn to it numerous examples of this. In the growth of its social product Britain has been lagging behind France, Germany and the United States only about 1 percent a year on the average, but that has been enough for the richest society in the world to become a relatively poor member of the European Economic Community in just a few generations. America's advantage in this regard was even smaller: its economy has been about 0.6 to 0.8 percent below [sic] the German, French, British and Japanese economies, but that was enough for the cumulative effects of that advantage to turn into a gigantic economic engine which has powerfully pulled the United States forward over the past 50 years.

The slower growth of Yugoslav productivity and its lag behind world productivity will in subsequent years impose restrictions on economic development which we have not yet registered, even though in the short run the gap between our own prices and foreign prices (which is what a relative lag in the growth of productivity inevitably causes in the end) is evened out by the sliding of the rate of exchange of the dinar. Consequently, if the growth of the Yugoslav social product is based predominantly on raising employment, as the present and anticipated situation in this domain suggests, then the years to come will demonstrate ex post facto the advantages of the orientation which we are now ex ante emphasizing as the model for our economy's stabilization.

**EKONOMSKA POLITIKA:** Of the activities which you have mentioned, augmented agricultural production would contribute to stabilization of the market and to

cooling off inflation, tourism could provide the indispensable foreign exchange, and small business is most frequently mentioned in the context of reducing unemployment. What additional effects could be anticipated from housing construction aside from mitigating the growing housing crisis?

**Savin:** I think that the situation is most distressing in housing construction. Housing construction could take over the role of an important accelerator of economic activity. In 1984 about 28,000 fewer housing units were built than in 1976, which was the record year in this regard, and later the system of "targeted housing construction" was adopted.

Current developments in the field of housing construction constitute a continuation of the trend which began a few years ago and which will probably be intensified in 1985. The number of housing units completed in 1982 (52,000) was 10 percent less than over the previous 12-month period. In 1983 the pace of housing construction was slowing down still more, and then in 1984 the lag set a record. According to preliminary estimates, about 32,000 housing units were built in the socialized sector, which would mean a drop of about one-third from 1983.

The growth of housing construction on the basis of sales on the market would make it possible to commit a portion of the available purchasing power of the population and turn it into deferred consumption. In addition, the strong multiplier effects of that production would also bring in its wake and activity in those activities whose products have been facing an ever more depressive demand (the furniture industry, household appliances, textiles, and so on). That would indirectly broaden the room for increasing employment. The value of the multiplier of employment in this sector is about 1.8, which is appreciably higher than the average multiplier for the economy as a whole. Speeding up housing construction would resolve one of the most acute issues of social welfare policy at the present time and would serve the vital interests of those who are employed and whom the present system of housing construction has placed in a position of waiting for housing more than a third of their working life.

Stepping up the pace of housing construction would have a stimulative effect on the investment of the foreign exchange savings of our workers employed abroad, who are holding their deposits in foreign banks. Creation of the necessary economic incentives in housing construction, in small business and in agriculture could improve the proportion in the balance of payments in a simpler way than implied by committing additional resources from the International Monetary Fund and from foreign commercial banks. I am convinced that it is precisely in that direction that we could open up an opportunity for us to "break loose" from those institutions, so that greater room would be opened for more autonomous operation of economic policy. But that is an issue to itself which I will not concern myself with here at this point.

**EKONOMSKA POLITIKA:** Let us go back to agriculture, which in enumerating the priority sectors you did put in first place.

Savin: Agricultural supply has been lagging behind demand for decades. Thus the aggregate demand for agricultural products, on the basis of population growth, the growth of personal income and in view of the implicit income elasticity, grew at an average annual rate of 3.1 percent over the period 1971-1981, while the aggregate supply increased at an average annual rate of 2 percent. Which is not to mention the extent to which the growth of production in agriculture has been lagging behind the planned growth. I think that if I run down a few figures I will not be abusing your attention. Over the period 1971-1975 the plan called for agricultural production to grow at an average annual rate of 3.5 percent, while actually it was 2.8 percent. That production was supposed to increase at a rate of 4 percent over the period 1976-1980, while actually it grew at a rate of 2 percent. Over the planning period 1981-1985 we counted on a 4.5-percent growth of agricultural production, but it probably will not be higher than 2.3 percent.

Given the lag of agricultural supply behind the demand, or, more accurately, behind needs, the price of food has been rising constantly. On the average expenditures for food now amount to 60-70 percent of total personal expenditures depending on the amount of income and the size of the family. In the world at large this proportion is far smaller. Expenditures for food in Japan, for example, amount to 32 percent of total expenditure, and in the United States 20 percent, while that percentage in the countries of the European Economic Community is lower and amounts to 19 percent.

EKONOMSKA POLITIKA: The adverse consequences of expensive food certainly go beyond its excessive proportion in family budgets, although here they are probably the most obvious.

Savin: Since expenditures for food are dominant in the growth of inflation and the cost of living, personal incomes have to adapt to them regardless of whether the results of economic activity stand behind their growth or not, that is, regardless of production efficiency, the size of losses, and so on. The more that income per employed person lags behind the rise of prices, the larger the share of personal income that will be committed to food, which will make them more susceptible to price changes in the coming period. As a consequence the growth of personal incomes will be determined almost entirely by the need to keep up with inflation, in which food costs are dominant. That is why it is nonsense to insist on the argument that personal incomes have to grow to keep pace with labor productivity. In our conditions at present this means absolutely nothing.

Regarding it as a business expense, organizations of associated labor pass on the rise of personal incomes--with a very short lag time--to their own cost of production either entirely or insofar as the situation on the market allows. Only if that is not possible will the higher operating costs be offset by a drop of accumulation or a growth of losses, or in both ways at once. Later the higher prices are built in through the input materials into the production of other organizations, also raising their operating costs proportionally. That is why I will repeat on this occasion that our rise of prices cannot be stopped until the effect of the key cause of inflation is smothered, and that means until food costs are reduced in both relative and absolute

terms. A growth of agricultural production is a necessary prerequisite to that.

It is clear that organizations of associated labor have to include the higher costs based on personal incomes into their cost of production. If personal incomes are uniform, i.e., if their marginal change is not determined by worker efficiency (which is precisely what happens when remuneration changes more under the impact of the cost of living than under the influence of the results of economic activity), then total average costs of manpower will be rising. Since the means of production are not homogeneous, certain parts of them will have a higher-than-average cost per unit output. So that the marginal costs of conducting economic activity would rise as output increases, even if personal incomes do not move up, although under the influence of the change in personal incomes, which food costs are constantly "pushing" upward, that growth would be proportionately greater. Only if the growth of production were achieved with fewer workers than at present, that is, if labor productivity rose precisely the same amount as the marginal costs of production, would it be possible to avoid passing the costs on in the prices.

Since for reasons of social welfare, and in certain regions of the country because of the additional need imposed by expansion of the production process, employment has to rise (at least at a rate which would be judged very modest under normal circumstances), and even the present volume of manpower in a self-managing economy cannot be reduced by discharging workers, a constant rise in labor productivity that would correspond to the change in operating costs is not possible. Which is why a rise of prices larger than the growth of primary operating costs is inevitable at some given level of current losses. Conversely, if the rise in operating costs cannot be covered by a proportionate rise of the marginal price, there will follow a growth of losses whose volume will be equal to the difference between the income realized and that which would have been realized if the planned rise of prices had occurred.

EKONOMSKA POLITIKA: You have run down the harm which comes from the present state of agriculture and the benefit that comes from making that production more dynamic. What remains is for you to evaluate the real possibilities for improvement.

Savin: We have all the necessary resources for a growth of that production. Absolutely everything, including financial resources and foreign exchange (about 60 percent of those employed abroad left rural areas, and so the inflow of foreign exchange on that basis is committed accordingly). What we lack is the organizational factor and we need to overcome certain ideological prejudices which in their origin and in their scope belong to the past. They are in the past pluperfect.

With properly tempered strokes it would be possible to get agricultural production going very quickly and to realize the comparative advantages which Yugoslavia possesses in that sector. We are referring primarily to primary production and to its stimulation, which might go in three basic directions. By lowering interest rates on bank credits for all activities in agriculture

and those activities which are based on it: by fiscal stimulation of production and distribution of foodstuffs (the tax on the cadastre income, say, would be raised 1,000-2,000 percent, but it would be reduced even to 10 percent according to whether additional production is being achieved, whether investment is being made to improve the production process, and so on). By abolishing absolutely all import, customs and similar restrictions on the purchase of equipment, machines, machine attachments, chemicals, etc., which are imported (we are probably the only country which has those restrictions and at the same time a food supply which is lagging about 30 percent behind the demand and which is at the same time spending hundreds of millions of dollars to import foodstuffs). In addition to that, of course, we should finally introduce a little more order and organization into the purchasing and stockpiling of farm products and the fruits of the earth. Depending on the length of the biological cycle, the results of organized agricultural production would be felt even within a period lasting from a few months to a year. And along with that there would be results in the domain of anti-inflation policy.

EKONOMSKA POLITIKA: Why have all the planning predictions of the rate of inflation made so far, including those last year, proved to be wrong? Practically nothing is left of the rates contained in the Anti-Inflation Program.

Savin: The planning of an appreciable reduction of inflation and the effort to achieve this while retaining the features of the system that are in place and which are generating disequilibrium, represent a blind alley. It is not possible, for example, to fit into a reduction of inflation from 60 percent to 40 percent a growth of depreciation, higher fixed operating costs, the costs of interest and the realistic rate of exchange, and all of these things in a situation where the function of the market has been disrupted, the relations formed in primary distribution are under strain, and the principal feature of commodity-money relations is the insufficient supply of goods.

Second, the changes that are coming about from introduction of the new features in the economic system and the taking of economic policy measures are unfolding under the conditions of retention of the economic structure more or less unchanged. All entities, regardless of marginal business performance and efficiency, and also regardless of the losses which are incurred, the method of operation, the competence of personnel, product quality, and so on, still remain on the economic scene. Whatever their business performance has been, that is always taken as given, and the adjustment to the altered operating conditions is not made in the real sphere--by closing down inefficient production and distribution units, by transforming them or merging them--but by raising prices, that is, by a growth of nominal, but not real, income. Inflation is the way in which macroeconomic balancing is now being accomplished in the Yugoslav economy. In the absence of market instruments that would make progress possible for propulsive organizations and would stand in the way of the survival and distorted development of those which are incompetent, the spontaneous indexing of prices and of all nominal aggregates of consumption makes it possible for both to survive, with the result that the average efficiency and average profitability are at a lower level than they would be otherwise.

All the calculations and arguments, all the reasons and justifications for raising prices are made solely and exclusively on the basis of the assumption that everything that exists is in and of itself justified and that as such it should in fact remain. Whether at a price rise of 6 percent or 66 percent is irrelevant. "I exist--therefore I am efficient" is a deep-seated maxim and at the heart of the behavior of our economic organizations. All changes and events are taken as external and exogenous phenomena, and since we are not adapting to them by changing the structure, that is, in real terms, we are adapting to them with the help of higher prices which a market in disarray has been accepting for years.

The present moment from the economic standpoint cannot be explained in terms such as: there was a time on earth when an Ice Age occurred. The dinosaurs died off and petroleum was created. In 1973 and 1980 the Arab countries raised the prices of that petroleum. Other raw materials, equipment, technology and credits became more expensive at the same time. The deficit in our balance of payments has gotten worse, the growth of production has slowed down, and prices have risen. All the rest is supposed to be the Long-Range Stabilization Program.

EKONOMSKA POLITIKA: Both taking advantage of short-run opportunities and changes in the economic structure and changes in the economic system presuppose a unified approach at the national level, that is, at the level of the entire economy.

Savin: The economy is a synergic system. The whole is more than a simple sum of the parts which make it up. Therefore no amount of linkage and association of parcelized segments of the economy can yield those results which would be afforded by an entire economy, that is, enterprises operating under the same conditions within an undivided economic space. By its very nature the macroeconomic process cannot take place successfully on the basis of an agreement concluded among individual entities, a process in which considerable social energy is spent on debates and agreements, even concerning things which are minor. But the worst--as experience is showing every day--is that the agreements are not being carried out once they are reached. The signatories simply are not abiding by them as soon as there are changes in the circumstances or expectations in whose shadow the agreements were adopted. The self-managing entity cannot function effectively on the basis of consensus concerning everything that the signals from the market should be telling it. The regional exclusiveness of economic organizations has not only torn loose the technological and economic ties between them, but has taken from them the motivation to accept the signals of the market and react to them. The shattering of the whole and then its subsequent "creation" by means of compacts and accords--which lies at the heart of the "consensus economy" which now has been almost completely discredited--is possible, but we have to know the economic price of such a choice. That is why it seems to me meaningless to argue, though people often do, that it is "intolerable" to have eight regional economies which are shut off from one another and that this is a "negative phenomenon." Why? Instead of eight, we can divide the country's economic space into 88 separate parts, but we have to know the economic consequences that follow upon this kind of organizational design of the

economy and what are the consequences of the existence of eight republic and provincial economies, and what we would get from a unified economy and an undivided market (which is, incidentally, a constitutional category).

Macroeconomic policy can suit its most profound definition insofar as it applies to the entire economy. Now most of its measures are in the authority of individual sociopolitical communities, which restricts or entirely precludes a unified approach toward the factors of disequilibrium. For example, one of the strongest and most important levers for stabilization--fiscal policy--lies in the competence of the republics and provinces, and that is also true of incomes policy, and to some extent money-and-credit policy as well.

EKONOMSKA POLITIKA: Finally, what are the long-range prospects of the Yugoslav economy, assuming that maximum advantage is taken of the breathing room that result from the solutions we have been talking about? What if it doesn't happen?

Savin: I would like to answer that question with the help of figures on what awaits us if by some chance we should develop under optimum conditions.

Let us suppose that Yugoslavia's real social product this year and all the remaining years of this decade increases at a constant average rate of 4 percent. That should be regarded as a very high rate and an ambitious task which I do not believe we can achieve. How ambitious it is is shown by the figure that the average annual growth of our social product over the period 1980-1984 was about 1 percent. But let us take that figure as the more sanguine side of the arithmetic to follow.

We estimate the per capita social product in 1984 at about \$2,400, although the faster sliding of the rate of exchange of the dinar against the dollar has recently been distorting real parities in purchasing power, which is why that figure is uncertain, but even if we move it up a few hundred dollars, the conclusions we arrive at will not undergo any change that would take away from their basic message. Assuming a constant growth of output at an annual average of 4 percent, the per capita social product would grow at about 3 percent (the growth of the population is estimated at about 0.7-0.8 percent per year), and in 1990 it would amount to about \$2,700, and the persistence of that rate would bring it up to \$3,800 in the year 2000. Approximately what Greece has now. At the boundary of the 21st century Yugoslavs would be living at a level one-third as high as the present standard of living of a citizen of Denmark or West Germany (whose standard of living would, of course, have advanced far further in the meantime). On the basis of this indicator Yugoslavia would be the poorest country in Europe except Albania.

Over the past 5 years the per capita social product in our country has been growing at a rate which did not exceed 1.5 percent; in 1982 and 1983 it even fell 0.2 percent and 2 percent, respectively; this year it probably will not exceed 1.8-2 percent. Assuming a constant 3-percent growth of per capita income, it would take us 16 years to reach the standard of living which the Greeks now have and 17 years the standard of living of the Spaniards. It would take us 31 years to reach the income of the average Italian, and we

would reach the income of the Danes and Germans only in 50 years. And that assuming, I repeat, that year after year all the way to the end of this century the per capita social product in Yugoslavia increases without interruption at a rate of 3 percent, which in view of the obligations to repay foreign debts, including the interest, is a task fit for a titan.

The performance of the Yugoslav economy--which obviously is modest--can be changed in coming years only by efficient conduct of business, assuming elimination of restrictions in the economic system which we have installed out of a belief that universal conclusion of compacts and accords would automatically bring about new and better social relations and would at the same time guarantee the country's economic progress. Neither of these things have occurred. What is one to say about the future? Intellectual clarity is one of the implements we resort to in order to avoid bias. The future development of self-management is possible only if economic development is faster, and unless we build up the prerequisites which will make it possible for the economy to take larger strides, we would be condemned to bring up the rear of the economic marathon which is now being run in Europe. This is not a metaphysical fear and trembling that can be opposed with vacillation, but a message that comes to the surface from the storehouse of facts which surround us.

7045  
CSO: 2800/182

YUGOSLAVIA

ALLOCATION OF FOREIGN EXCHANGE FOR FEDERAL USE, 1985

Belgrade SLUZBENI LIST SFRJ in Serbo-Croatian No 5, 8 Feb 85 pp 184-190

[Order issued by the Federal Executive Council in Belgrade on 17 January 1985: "Order on Allocation of Foreign Exchange Committed to the Needs of Federal Bodies and Agencies and to the Purposes of Exercising the Rights and Discharging the Duties of the Federation in 1985"]

[Text] On the basis of Article 72 of the Law on Foreign Exchange Transactions and Credit Relations With Foreign Countries (SLUZBENI LIST SFRJ, No 15, 1977; No 61, 1982; No 71, 1982; No 34, 1983; and No 70, 1983), the Federal Executive Council issues the following

ORDER

On Allocation of Foreign Exchange Committed to the Needs of Federal Bodies and Agencies and to the Purposes of Exercising the Rights and Discharging the Duties of the Federation in 1985

1. The foreign exchange to meet the needs of federal bodies and agencies and the purposes of exercising the rights and discharging the duties of the Federation, as committed in Point 2, under 2), of the Order Committing the Total Amount of Foreign Exchange for the Needs of the Federation in 1985 (SLUZBENI LIST SFRJ, No 71, 1984), in a value equivalent to 121,415,748,895 dinars, may be used for the invisible and visible payments of federal bodies and agencies and organizations, certain bodies of public organizations and institutions which are performing tasks of interest to discharging the functions of the Federation and which perform their activity over the entire territory of the Socialist Federal Republic of Yugoslavia, if the resources for performance of those tasks from their own revenues are inadequate, and also to meet other purposes of the Federation, as follows:

- 1) for invisible payments--up to the sum of 15,139,432,000,
- 2) for visible payments--up to the sum of 103,055,777,000.

The sum of 3,240,539,895 dinars is set aside from the total amount of foreign exchange stated in Paragraph 1 of this point to meet the unforeseen and under-estimated expenditures (reserves).

The federal secretary for finance is hereby authorized on the application of the competent controllers to allow expenditures from the reserves referred to in Paragraph 2 of this point, such expenditures not to exceed the amount of 1 million dinars in each individual case.

2. The allocation of foreign exchange for 1985, which is published along with this order and is an integral part of it, states the maximum amount of foreign exchange for individual users within the limits of the amount stated in Point 1, Paragraph 1, of this order.

3. The total amount of foreign exchange stated in Point 1 of this order may be used as follows: 74.70 percent in convertible currencies and 25.30 percent in other currencies.

The federal secretary for finance is hereby authorized to allow individual users to use foreign currencies in higher or lower percentages than the percentages stated in Paragraph 1 of this point provided the total amount of foreign exchange does not exceed 74.70 percent in convertible currencies.

4. Foreign exchange shall be made available to the users under this order on the basis of a substantiated and documented application.

Foreign exchange shall be made available to users to whom resources have been allocated as part of the resources of a particular federal body or agency or organization on the basis of the application of the federal body, agency or organization to finance programs and tasks which have been established and contracted for.

5. The federal secretary for finance is hereby authorized on the application of the competent controllers to alter the purpose and amount of resources committed to invisibles in the Allocation of Foreign Exchange for 1985.

6. The federal secretary for finance is hereby authorized on application of the competent controllers to refund resources set forth in the Allocation of Foreign Exchange for 1985.

7. This order shall take effect on the day after publication in SLUZBENI LIST SFRJ.

Economic Enactment No 25  
Belgrade, 17 January 1985

Federal Executive Council

Dr Mijat Sukovic (signed)  
Vice Chairman

Allocation of Foreign Exchange for 1985

No	User	In Dinars
1	2	3
1	State Presidency of the Socialist Federal Republic of Yugoslavia	
	1) For its own payments	
	Invisibles:	
	Official travel	15,737,000
	Other payments	<u>1,100,000</u>
	Visibles	16,887,000
		2,955,000
	2) For the needs of the Department for Entertainment Facilities of the SFRY State Presidency	
	Invisibles:	
	Official travel	186,000
	Visibles	<u>3,270,000</u>
	Total	<u>23,298,000</u>
2	SFRY Assembly	
	Invisibles:	
	Official travel	13,370,000
	Assessments	4,630,000
	Other payments	<u>48,000</u>
	Visibles	18,048,000
		<u>46,750,000</u>
	Total	<u>64,798,000</u>
3	Council of the Federation	
	Invisibles:	
	Official travel	<u>44,000</u>
	Total	<u>44,000</u>
4	Federal Executive Council	
	1) For its own payments	
	Invisibles:	
	Official travel	61,619,000
	Assessments	362,000,000
	Other payments	<u>1,857,000</u>
	Visibles	425,476,000
		28,966,000

<u>No</u>	<u>User</u>	<u>In Dinars</u>
		<u>3</u>
2)	For the needs of the Department for Defense Preparations of the Federal Executive Council	
	Visibles	<u>12,984,000</u>
	Total	<u>467,426,000</u>
5	Federal Court	
	Invisibles:	
	Official travel	<u>207,000</u>
	Visibles	<u>95,000</u>
	Total	<u>302,000</u>
6	Federal Public Prosecutor's Office	
	Invisibles:	
	Official travel	<u>475,000</u>
	Total	<u>475,000</u>
7	Federal Solicitor General's Office	
	Invisibles:	
	Official travel	<u>302,000</u>
	Total	<u>302,000</u>
8	Federal Secretariat for Foreign Affairs	
	Invisibles:	
	Official travel	<u>83,565,000</u>
	Missions	<u>8,747,770,000</u>
	Assessments	<u>656,859,000</u>
	Other payments	<u>61,450,000</u>
	Visibles	<u>9,549,644,000</u>
		<u>116,339,000</u>
	Total	<u>9,665,983,000</u>
9	Federal Secretariat for National Defense	
	Invisibles:	
	Official travel	<u>66,682,000</u>
	Missions	<u>306,405,000</u>
	Assessments	<u>5,838,000</u>

No	User	In Dinars
1	2	3
	Medical treatment abroad	39,571,000
	Advanced specialized training	338,937,000
	Other payments	8,109,000
	Visibles	<u>765,542,000</u>
		<u>97,657,228,000</u>
	Total	<u>98,422,770,000</u>
10	Federal Secretariat for Internal Affairs	
	1) For its own payments	
	Invisibles:	
	Official travel	28,272,000
	Assessments	15,042,000
	Advanced specialized training	5,208,000
	Other payments	329,141,000
	Visibles	<u>377,663,000</u>
		<u>952,308,000</u>
	2) For the needs of the Yugoslav Traffic Safety Council	
	Invisibles:	
	Official travel	398,000
	Assessments	430,000
	Total	<u>828,000</u>
		<u>1,330,799,000</u>
11	Federal Secretariat for Finance	
	Invisibles:	
	Official travel	4,754,000
	Assessments	350,217,000
	Transfer of legacies and child support	59,519,000
	Other payments	<u>1,170,928,000</u>
	Visibles	<u>1,585,418,000</u>
		<u>558,000</u>
	Total	<u>1,585,976,000</u>
12	Federal Secretariat for Foreign Trade	
	Invisibles:	
	Official travel	4,697,000
	Assessments	94,482,000
	Other payments	<u>1,042,000</u>
	Total	<u>100,221,000</u>

No	User	In Dinars
1	2	3
13	<b>Federal Secretariat for the Market and General Economic Affairs</b>	
	<b>Invisibles:</b>	
	Official travel	400,000
	Assessments	15,127,000
	Other payments	186,000
		<u>15,713,000</u>
	<b>Total</b>	<u>15,713,000</u>
14	<b>Federal Secretariat for Jurisprudence and Organization of the Federal Administration</b>	
	<b>1) For its own payments</b>	
	<b>Invisibles:</b>	
	Official travel	1,500,000
	Advanced specialized training	1,042,000
	Other payments	1,114,000
		<u>3,656,000</u>
	<b>2) For the needs of the Data Processing Bureau of Federal Bodies and Agencies</b>	
	<b>Invisibles:</b>	
	Official travel	185,000
	Specifications	253,000
	<b>Visibles</b>	<u>438,000</u>
		<u>392,000</u>
	<b>3) For the needs of the Bureau for Upgrading the Federal Administration</b>	
	<b>Invisibles:</b>	
	Official travel	50,000
	Assessments	768,000
		<u>818,000</u>
	<b>Total</b>	<u>5,304,000</u>
15	<b>Federal Secretariat for Information</b>	
	<b>1) For its own payments</b>	
	<b>Invisibles:</b>	
	Official travel	6,642,000
	Other payments	9,686,000
	<b>Visibles</b>	<u>16,328,000</u>
		<u>154,363,000</u>

No	User	In Dinars
1	2	3
2) For the needs of Radio Yugoslavia		
Invisibles:		
	Official travel	1,053,000
	Visibles	270,301,000
3) For the needs of Yugoslav Radio-Television		
Invisibles:		
	Official travel	7,440,000
	Assessments	133,895,000
	Other payments	30,160,000
	Visibles	171,495,000
		14,835,000
4) For the needs of the TANJUG News Agency		
Invisibles:		
	Official travel	11,063,000
	Foreign correspondents	356,924,000
	Assessments	2,666,000
	Other payments	195,952,000
	Visibles	566,605,000
		94,400,000
5) For the needs of the weekly MOVIE NEWS JOURNAL		
Invisibles:		
	Official travel	765,000
	Assessments	352,000
	Visibles	1,117,000
		37,200,000
	Total	1,327,697,000
16 Federal Committee for Legislation		
1) For its own payments		
Invisibles:		
	Official travel	241,000
2) For the needs of the Sluzbeni List SFRJ Newspaper Publishing Institution		
	Visibles	29,388,000
	Total	29,629,000

<u>No</u>	<u>User</u>	<u>In Dinars</u>
<u>1</u>	<u>2</u>	<u>3</u>
17	Federal Committee for Energy and Industry	
	Invisibles:	
	Official travel	1,773,000
	Assessments	<u>66,241,000</u>
	Total	<u>68,014,000</u>
18	Federal Committee for Agriculture	
	Invisibles:	
	Official travel	2,482,000
	Assessments	6,330,000
	Other payments	<u>18,570,000</u>
	Total	<u>27,382,000</u>
19	Federal Committee for Transportation	
1)	For its own payments	
	Invisibles:	
	Official travel	2,000,000
	Assessments	<u>83,404,000</u>
	Total	<u>85,404,000</u>
2)	For the needs of the Institution for Maintaining Seaways	
	Visibles	44,920,000
3)	For the needs of the Institution for Maintaining Inland Waterways	
	Invisibles:	
	Official travel	762,000
	Assessments	<u>206,000</u>
	Visibles	<u>968,000</u>
	Total	<u>39,333,000</u>
4)	For the needs of the Yugoslav Register of Ships	
	Invisibles:	
	Official travel	758,000
	Other payments	<u>7,400,000</u>
	Visibles	<u>8,158,000</u>
	Total	<u>37,140,000</u>

No	User	In Dinars
	2	3
	5) For the needs of the Geomagnetic Institute	
	Invisibles:	
	Official travel	286,000
	Visibles	<u>8,162,000</u>
	Total	<u>224,371,000</u>
20	Federal Committee for Labor, Health and Social Welfare	
	1) For its own payments	
	Invisibles:	
	Official travel	2,410,000
	Assessments	<u>306,025,000</u>
	Visibles	308,435,000
		66,156,000
	2) For the needs of the Federation of Health Insurance and Health Communities of Yugoslavia	
	Invisibles:	
	Official travel	64,000
	3) For the needs of the Federation of Old-Age and Disability Insurance Communities of Yugoslavia	
	Invisibles:	
	Official travel	305,000
	Assessments	<u>4,661,000</u>
	Total	<u>379,621,000</u>
21	Federal Bureau for Employment Security	
	Invisibles:	
	Official travel	<u>2,000,000</u>
	Total	<u>2,000,000</u>
22	Federal Committee for Affairs of Veterans and Military Disabled	
	Invisibles:	
	Official travel	350,000

<u>No</u>	<u>User</u>	<u>In Dinars</u>
		<u>3</u>
	Disability benefits	232,773,000
	Other payments	<u>20,100,000</u>
	Total	<u>253,223,000</u>
23	<b>Federal Customs Administration</b>	
	<b>Invisibles:</b>	
	Official travel	1,034,000
	Assessments	<u>5,886,000</u>
	Visibles	<u>6,920,000</u>
	Total	<u>126,408,000</u>
24	<b>Federal Administration for Flight Control</b>	
	<b>Invisibles:</b>	
	Official travel	1,152,000
	Assessments	<u>1,576,000</u>
	Advanced specialized training	10,061,000
	Other payments	<u>18,369,000</u>
	Visibles	<u>31,158,000</u>
	Total	<u>532,000,000</u>
25	<b>Federal Administration for Radio Communications</b>	
	<b>Invisibles:</b>	
	Official travel	1,000,000
	Assessments	<u>1,543,000</u>
	Other payments	<u>1,543,000</u>
	Visibles	<u>4,086,000</u>
	Total	<u>15,200,000</u>
26	<b>Federal Foreign Exchange Inspectorate</b>	
	<b>Invisibles:</b>	
	Official travel	<u>1,182,000</u>
	Total	<u>1,182,000</u>
27	<b>Federal Aviation Inspectorate</b>	
	<b>Invisibles:</b>	
	Official travel	1,417,000

<u>No</u>	<u>User</u>		<u>In Dinars</u>
			<u>3</u>
	Other payments		851,000
	Visibles		2,268,000
			1,020,000
	Total		3,288,000
28	<del>Federal Bureau for Social Planning</del>		
	Invisibles:		
	Official travel		500,000
	Total		500,000
29	<del>Federal Community for Price Affairs</del>		
	Invisibles:		
	Other payments		270,000
	Total		270,000
30	<del>Federal Bureau for International Scientific, Educational and Cultural, and Technical Cooperation</del>		
	Invisibles:		
	Official travel	8,065,000	
	Assessments	87,600,000	
	Other payments	106,340,000	202,005,000
	Total		202,005,000
31	<del>Federal Bureau for Statistics</del>		
	Invisibles:		
	Official travel	1,242,000	
	Assessments	62,000	1,304,000
	Visibles		389,970,000
	Total		391,274,000
32	<del>Federal Hydrometeorology Bureau</del>		
	Invisibles:		
	Official travel	288,000	
	Assessments	64,216,000	
	Other payments	899,000	65,403,000
	Visibles		29,428,000
	Total		94,831,000

No	User	In Dinars
1	2	3
<b>33 Federal Bureau for Standardization</b>		
Invisibles:		
	Official travel	2,000,000
	Assessments	16,292,000
	Other payments	<u>540,000</u>
	Visibles	18,832,000
		<u>2,600,000</u>
	Total	<u>21,432,000</u>
<b>34 Federal Bureau for Patents</b>		
Invisibles:		
	Official travel	394,000
	Other payments	<u>3,544,000</u>
	Total	<u>3,938,000</u>
<b>35 Federal Bureau for Weights and Measures and Precious Metals</b>		
Invisibles:		
	Official travel	611,000
	Assessments	4,372,000
	Other paymetns	<u>595,000</u>
	Visibles	5,578,000
		<u>39,660,000</u>
	Total	<u>45,238,000</u>
<b>36 Federal Geology Bureau</b>		
Invisibles:		
	Official travel	<u>617,000</u>
	Total	<u>617,000</u>
<b>37 Yugoslav Archives</b>		
Invisibles:		
	Official travel	670,000
	Assessments	237,000
	Other payments	<u>237,000</u>
	Visibles	1,144,000
		<u>3,100,000</u>
	Total	<u>4,244,000</u>

No	User	In Dinars
	2	3
38	<b>Federal Directorate for Commodity Reserves</b>	
	<b>Invisibles:</b>	
	Official travel	1,689,000
	Other payments	35,000
		<u>1,724,000</u>
	<b>Total</b>	<u>1,724,000</u>
39	<b>Department for Rendering Services To Meet the Entertainment Needs of Federal Bodies and Agencies</b>	
	<b>Invisibles:</b>	
	Official travel	3,600,000
	Other payments	74,266,000
		<u>77,866,000</u>
	<b>Visibles</b>	<u>75,934,000</u>
	<b>Total</b>	<u>153,800,000</u>
40	<b>Department for Financial and Supply Affairs of Federal Administrative Agencies and Federal Organizations</b>	
	<b>Visibles</b>	<u>1,200,000</u>
	<b>Total</b>	<u>1,200,000</u>
41	<b>Department for Support Services of Federal Administrative Agencies and Federal Organizations</b>	
	<b>Visibles</b>	<u>33,013,000</u>
	<b>Total</b>	<u>33,013,000</u>
42	<b>Administration of the Office Buildings of Federal Bodies and Agencies</b>	
	<b>Visibles</b>	<u>3,909,000</u>
	<b>Total</b>	<u>3,909,000</u>
43	<b>Garage of Federal Bodies and Agencies</b>	
	<b>Visibles</b>	<u>7,425,000</u>
	<b>Total</b>	<u>7,425,000</u>

No	User	In Dinars
1	2	3
44	Department for Translation	
	Invisibles:	
	Official travel	430,000
	Advanced specialized training	1,088,000
	Visibles	<u>1,518,000</u>
		<u>3,001,000</u>
	Total	<u>4,519,000</u>
45	Federal Fund for Credit Financing the Faster Development of the Economi- cally Underdeveloped Republics and Autonomous Provinces	
	Invisibles:	
	Official travel	112,000
	Total	<u>112,000</u>
46	Presidium of the Central Committee of the League of Communists of Yugoslavia	
	1) For its own payments	
	Invisibles:	
	Official travel	2,909,000
	Other payments	75,162,000
	Visibles	<u>78,071,000</u>
		<u>8,005,000</u>
	2) For the needs of the Komunist Newspaper Publishing Enterprise	
	Invisibles:	
	Official travel	1,724,000
	Other payments	5,417,000
	Visibles	<u>7,141,000</u>
		<u>68,000</u>
	3) For the needs of the Administration of the Building of the LCY Central Committee and the Serbian LC Central Committee	
	Invisibles:	
	Official travel	76,000
	Other payments	343,000
	Visibles	<u>419,000</u>
		<u>25,142,000</u>
	Total	<u>118,846,000</u>

No	User	In Dinars
	2	3
47	Federal Conference of the Socialist Alliance of Working People of Yugoslavia	
	1) For its own payments	
	Invisibles:	
	Official travel	9,913,000
	Assessments	232,000
	Other payments	26,457,000
		36,602,000
	2) For the needs of the Borba Newspaper Publishing and Printing Enterprise	
	Invisibles:	
	Official travel	12,000,000
	Foreign correspondents	23,173,000
	Visibles	112,600,000
	Total	184,375,000
48	Presidium of the Conference of the Socialist Youth League of Yugoslavia	
	Invisibles:	
	Official travel	15,000,000
	Assessments	3,167,000
	Other payments	7,363,000
	Visibles	25,530,000
	Total	1,847,000
		27,377,000
49	Federation of Associations of Veterans of the National Liberation War of Yugoslavia	
	Invisibles:	
	Official travel	3,185,000
	Assessments	213,000
	Total	3,398,000
50	Council of the Federation of Yugoslav Trade Unions	
	Invisibles:	
	Official travel	9,870,000

<u>No</u>	<u>User</u>	<u>In Dinars</u>
<u>1</u>	<u>2</u>	<u>3</u>
	Assessments	4,433,000
	Other payments	<u>10,344,000</u>
	Total	<u>24,647,000</u>
51	Presidency of the Yugoslav Red Cross	
	Invisibles:	
	Official travel	2,507,000
	Assessments	7,613,000
	Other payments	<u>17,570,000</u>
	Total	<u>27,690,000</u>
52	Yugoslav League for Peace, Independence and Equality of Nations	
	Invisibles:	
	Official travel	1,323,000
	Assessments	<u>270,000</u>
	Total	<u>1,593,000</u>
53	Federation of United Nations Associations of Yugoslavia	
	Invisibles:	
	Official travel	408,000
	Assessments	<u>115,000</u>
	Total	<u>523,000</u>
54	Physical Fitness Federation of Yugoslavia	
	Invisibles:	
	Official travel	33,864,000
	Assessments	<u>12,635,000</u>
	Visibles	<u>46,499,000</u>
	Total	<u>25,396,000</u>
		<u>71,895,000</u>
55	"People's Technology"--Federation of Organizations for Popular Technical Education of Yugoslavia	
	Invisibles:	
	Official travel	1,512,000

No	User	In Dinars
		3
	Assessments	1,820,000
		3,332,000
	Total	3,332,000
56	Firefighting Alliance of Yugoslavia	
	Invisibles:	
	Official travel	938,000
	Assessments	142,000
		1,080,000
	Total	1,080,000
57	Social Accounting Service of Yugoslavia	
	Invisibles:	
	Official travel	2,660,000
	Assessments	485,000
	Other payments	6,128,000
	Visibles	9,273,000
		1,253,776,000
	Total	1,263,049,000
58	National Bank of Yugoslavia	
	Invisibles:	
	Official travel	5,674,000
	Assessments	209,000
	Advanced specialized training	4,575,000
	Other payments	21,000,000
	Visibles	31,458,000
		727,032,000
	Total	758,490,000
59	Cooperative Alliance of Yugoslavia	
	Invisibles:	
	Official travel	402,000
	Assessments	1,579,000
		1,981,000
	Total	1,981,000
60	SFRY National Committee of the International Board of Trade	
	Invisibles:	
	Official travel	155,000
	Assessments	1,137,000
		1,292,000
	Total	1,292,000
	Grand total	118,175,209,000

YUGOSLAVIA

**KRAJGER DISCUSSES STATUS OF ECONOMIC STABILIZATION**

Belgrade **PRIVREDNI PREGLED** in Serbo-Croatian 9-11 Feb 85 pp 1, 4

[Interview with **Sergej Krajger**, member of the LCY Central Committee, by **Zdravka Cicmirko-Pokrajcic**: "The Criteria for Evaluation Have 'Slipped'"; date and place not specified]

[Text] Quite a large body of material has so far been written about the economic disturbances in Yugoslavia, and one can say that it has brought to light--explicitly or implicitly--the various views, arguments and "policies" concerning the country's basic social problems today and platforms and directions for resolving them. The debates have spread very quickly from the domain of the economy and have embraced all major sectors and problems of the life of society. Yet in July 1983 when the SFRY Assembly, and before that the central political bodies of leadership in the Federation and the republics and provinces, adopted the Long-Range Economic Stabilization Program, that was the sociopolitical event which, though greatly delayed and for all its shortcomings, was capable of putting an end to the hesitation and of preventing the tendency to turn disturbances with the earmarks of crisis into a real social crisis. A consensus was also arrived at to the effect that a way out could be found in evolutionary reforms, which might even take a long time, but they would have to be carried out in all spheres of the life of society.

Why is the stabilization program not being carried out as was set forth in the documents, where do the causes of the hangup lie, and what is the strategy for the future; these were the topics on which **Sergej Krajger**, member of the LCY Central Committee, spoke with our staff writer **Zdravka Cicmirko-Pokrajcic**.

[Question] The participants so far in our series on the directions taken by stabilization have been advocating consistent implementation of the Long-Range Economic Stabilization Program. But it seems that the strength is lacking for that. What is your impression?

[Answer] I would not say that the strength is lacking. I am convinced that this year we will begin to make up for what we have omitted to do in past years, suffering, of course, an appreciable political and economic loss. The system of socialist self-management, and especially the character of the Long-Range ... Program, requires that everyone take his part of the responsibility for his own work and behavior in his own milieu, organization and community as

it is carried out. This is a particular responsibility of the League of Communists, of the Socialist Alliance, of their local organizations, and of leaders in society at large and in every self-managing and sociopolitical organization and community. Science and the professions should also contribute through their own activity to resolving the problems and changing the situation.

#### Economic Coercion

It is true that people have been rather slow in becoming aware that achievement of these goals is not primarily the business of the Federal Executive Council and of its measures, of the executive councils of the republics and provinces, of their assemblies and of the SFRY Assembly, even though their responsibilities and powers are great. They pertain above all to stating the strategy and establishing the foundations for development policy, making changes in the economic and political system, and creating the general conditions for the conduct of economic activity.

The Program could and should be used to a greater extent to strengthen the ties between delegations and their constituency, which means with workers in OUR's (organizations of associated labor), opstinas and other self-managed structures. Its integrative function would thus be fully manifested in all the republics and provinces and also in Yugoslavia as a whole. I think that this is the essence of and a condition for its more intensive and consistent realization.

We should look at what is actually happening in the assemblies of the republics and provinces, where stands are being formulated, and at what is happening in the SFRY Assembly, where these positions are reconciled and where the decisions are made and laws adopted. The Program clearly stated the attitude toward "losers," OUR's which have been operating on the boundary between profit and loss for years. Now everything is being done in various ways to rescue such organizations and charge it to those whose business is successful. Or, for example, the Law on the Joint Reserves of Opstinas and Republics, which according to the Anti-Inflation Program, was supposed to primarily cover the personal incomes of workers in OUR's which get into a difficult situation, but not to perpetuate OUR's which are ready for emergency financial rescue or liquidation. Its consistent application is being put off. Moreover, a decision has been made in the SFRY Assembly to charge interest payments to material costs, which means that the economic pressure of interest is being passed on to prices. Shortcomings and a deficiency of the specific political work being done in the delegations of our assembly system and in the base itself are making themselves evident in such solutions.

[Question] Those who adopted and gave their consent to the Stabilization Program are sitting in the SFRY Assembly. How is one to account for such differences in what they advocate now?

[Answer] Today everyone is in favor of the Stabilization Program. However, many people behave differently when it comes to carrying out individual measures in practice. When the question is put, for example, of personal incomes in OUR's operating at a loss, of the drop in the standard of living, of the

need for structural changes, of putting a stop to investment projects which do not have priority, and similar questions which involve a change in acquired positions and habits, then dilemmas arise. A host of questions spring up: will those measures get the support of the workers, will the working people themselves become involved on the basis of their own economic interests, and so on. After all, if they do not become directly involved, the basic conditions do not exist for carrying out the program and for progressive resolution of the inevitable conflicts in reconciling the contradictory interests of associated labor and of society as a whole.

[Question] Now everyone is calling upon the workers to accept the stabilization and is appealing to their consciousness?

[Answer] You know, the Program also counts on their consciousness, but it counts as well on their actual economic interest. The essence is precisely in the fact that it expresses the direct and long-range interests of working people and those tendencies in our social development which have to be pursued (zakonite). The Program also contains the methods and conditions for its implementation, which should also give economic motivation to the working people and which at the same time are a form of coercion for them to achieve the goals and tasks of the Program by pursuing their own interests in reproduction, in their own life and in their own development.

[Question] The discussions after the 13th Meeting of the LCY Central Committee demonstrated that associated labor is ready to carry out the stabilization. However, can the economy do it itself when it is burdened with various payment obligations?

[Answer] I think that the greatest omission in carrying out the Anti-Inflation Program, aside from the tardiness in abandoning the administrative setting prices, is precisely that: that the financial independence of OOUR's [basic organization of associated labor] from the banks was not enhanced and that nothing has been done as yet so that the banks would actually become a service dependent upon the decision and interests of the workers of OOUR's. As is well known, the situation right now is the reverse.

#### Global Comparisons

In the present situation it is difficult for the workers to exercise control over the conduct of business by their professional managers, and it is altogether impossible for them to monitor what is done by the decisionmakers in the banks. This is a system in which the dependency on credit occurs on the basis of the available resources of the OOUR's themselves, on which they barely get any interest at all from the banks in relative terms, while real rates of interest are collected on the credits extended to the OOUR's.

Let us pursue this question further. The burden should be taken off the income of OOUR's and of the economy as a matter of policy of workers' councils and the general measures of economic policy and the system, so that the resources that represent that relief are actually distributed so as to raise labor productivity.

[Question] A few years ago the earnings of the Yugoslav worker and the worker in western Europe were approximately the same. Today, with all the payment obligations to SIZ's [self-managing community of interest] "costs" \$150, while in the countries of western Europe \$800 to \$1,000. Who, Comrade Krajcer, is taking the brunt of our stabilization?

[Answer] With an average personal income of, I think, slightly over \$200, it would be an illusion to think that we can build a technologically up-to-date and competitive economy with modern organization.

Such an economy necessitates a corresponding social and individual productivity of labor. If labor productivity is to be constantly encouraged, personal incomes, that is, remuneration according to individual performance, creativity and inventiveness will have to conform to that aim. To be sure, the differences from other countries are not so great in this respect. If we include all the expenditures in our country for old-age and health insurance, social welfare, the differences are considerably smaller. So, here again we are talking about an average and global expression of a comparison. The trouble with us is that we have a lot of leveling; personal incomes actually depend little upon a worker's actual contribution. This applies to everyone, and not just to production workers.

[Question] The Program foresaw that certain differences in social welfare would come about as its measures were implemented. But it foresaw overcoming those differences. This year the budget was augmented 56 percent on the basis of taxes, which means, at the expense of the workers!

[Answer] It is a fact that implementation of the Program has not been accompanied either in the republics and provinces or in opštinas and OVR's by a full-fledged and consistent program of social-welfare policy as an integral part of economic policy, which was explicitly emphasized in the documents embodying the program. This is also a factor which tends to make political entities indecisive and inconsistent in carrying out the Program. However, when we speak about the worker, we are usually thinking of workers who are permanently employed and of the income they realize on that basis. We forget that there are many people who are not permanently employed, that their earnings are very high and that they are not based on labor. And then we have people who are employed whose personal incomes vary greatly for approximately the same work because of differences in the income of their organization or because of a lack of uniformity in price relations, because of monopoly position, and because their earnings outside permanent employment are not taxed. A large difference in earnings comes about because we have not placed appropriate burdens on income derived from land and structures, on earnings derived from transactions with the foreign exchange of our workers employed abroad and interest from the advantage taken at various other possibilities created by inflation and credit relations.

[Question] Was that foreseen by the Program?

[Answer] This is in all the documents, separately for each domain of the life and work of society. Aside from working capital, one of the oversights was

that federal bodies and agencies responsible for the conditions under which economic activity is performed and the bodies and agencies in the republics, provinces and opstinas have failed to take this into account; indeed they are perpetuating the old relations. As a rule we can confidently say not so much because of ignorance as because of opportunism. Without, that is, justification. The agreement among the republics and also the laws which will be enacted on that basis do not offer guarantees that we will get the radical changes which have been sought because of the increasingly pronounced and unjustified social inequities.

#### Income and Overall Development

The hue and cry in our assemblies and the news media, especially about the federal budget, to a large extent also expresses a lack of will and too little commitment to put the bite on earnings which are not now burdened in order to meet the needs of government [original reads "general professional needs"] which are financed from the budget and are in the interest of all citizens. I do not mean to say here that there is not still a great deal in all the budgets which has to be brought into conformity with the requirements of stabilization.

[Question] Why is it that there is a great deal of talk about the so-called "world crisis," for example, in the case of electric power rates? Was this also incorporated into the Stabilization Program?

[Answer] The Program foresaw that everyone should keep up with those prices and take into account the share of the various elements in the structure of prices of products and services of their foreign competitors.

[Question] Which means that an automatic equalization was not provided for, but rather an examination?

[Answer] Yes, the Program points out that this is necessary for every competitive commodity and for every producer.

[Question] An important segment of the Stabilization Program concerned foreign economic relations and in that context the Foreign Exchange Law and the foreign exchange market. There has been quite a bit of discussion and various proposals in this regard?

[Answer] The income of society as a whole and indeed of every economic entity depends directly on foreign economic relations and the realization of foreign exchange, and this is reflected in dinar earnings in income. This is one of the things stated in the Long-Range Economic Stabilization Program. The inflow of foreign exchange from foreign business transactions and the net inflow of foreign exchange represent a part of the resources of society expressed in foreign currency and they constitute an integral and organic part of the gross income of the OUR, of total income, which is specifically reflected in the economy of every republic and province according to the structure of its own economy and the pattern of its foreign business transactions. After all, the economy in every republic thereby realizes income which covers its general

development as well as obligations and responsibilities up to the Federation, that is, for its development. This, of course, is also expressed in a particular way in relations among the republics.

In the permanent solutions of the Long-Range Program we stated that in essence the entire economy should be oriented toward exports, that is, every work organization should in its production, rendering of services and business policy be on an equal footing with every other with which it is directly or indirectly related in the vertical chain of reproduction. That is, the economic conditions for the conduct of business and the position of those OUR's must be the same if not indeed more favorable than the position and conditions of those OUR's which in their business policy and development would not adopt such an orientation.

By contrast with the situation before the commission began its work, the Program stated that anyone who takes foreign credits, either directly or through the banks, must be capable of repaying those credits and must also be required to do so, directly or together with his trading partners. The point of this was to prevent what got us into the present situation, to prevent foreign credits from being spent on domestic consumption, regardless of the extent to which that consumption is related to equipping those entities and the country as a whole for repaying obligations abroad.

[Question] How did the Program foresee the foreign exchange market?

[Answer] In the permanent solutions we adopted dinar convertibility on the basis of the rate of exchange. But how is dinar convertibility to be achieved so that whenever someone needs foreign exchange to import production supplies he can convert his dinar into foreign exchange. There have been differing opinions on this matter which have not yet been reconciled. Some people feel that cession of foreign exchange is the only way out. This would, they say, create the conditions for the operation of the foreign exchange market in that the emphasis would be on regulating the rights of every entity to foreign exchange and the criteria for the exercise of those rights would be regulated on the foreign exchange market. Other people feel that this would still involve administrative distribution, which is always poorer in its results than when the economy reaches agreement on distribution of foreign exchange on the basis of business relations.

#### The Worker and Social Capital

The dispute is actually over two essential issues. First, it is a fact that even in our social system, by contrast with others, as soon as foreign exchange is realized, it is "nationalized," it becomes social, it immediately goes into the account which our bank has abroad. Some people draw the conclusion from this, and I am one of them--that the OUR which participated in realizing the foreign exchange should on that basis become automatically entitled to incorporate it as a part of its joint (dinar) gross income and income.

The prevailing opinion, by contrast, is that OUR's acquire such rights only when they sell foreign exchange to an authorized bank.

The second set of issues has to do with whether foreign exchange is a commodity, whether it is a means of social production, whether under the constitution and the Law on Associated Labor it can be treated as a condition and result of labor, so that like other such resources it can be pooled, that is, can such resources be managed in conformity with the constitution and the Law on Associated Labor? Moreover, as such it has a market price, which in every country is regulated in the manner that suits that country. In our country at the present time this is set forth by the National Bank of Yugoslavia on the basis of the real rate of exchange of the dinar. These issues will certainly be resolved in the work of the working group headed by Comrade Planinc, which by the end of March is supposed to propose the draft of the new foreign exchange law in conformity with the lasting solutions contained in the relevant document of the Long-Range Economic Stabilization Program.

All the controversial transitional solutions representing compromises which have come about in the meantime, along with the various modifications of the present foreign exchange law, have failed to yield the anticipated results. After all, every year the balance of power is tested as to whether and to what extent to go in a particular direction on the basis of transitional solutions which have been agreed on and incorporated into the relevant provisions in the relevant document of the Program. The results of this are well known. Nevertheless, in spite of all this the strength of our economy and also of its potential have been demonstrated, since even under these conditions it has achieved significant results in exporting, especially to convertible markets.

[Question] You have mentioned the testing of strength. It seems that this has also been something essential to the changes announced in the political system. What was said about that in the Program?

[Answer] I have not yet heard anyone in a position of responsibility in this society to say he was against the changes in the political or economic system which have been proven to be necessary by our social practice. Some of them were in fact pointed out by the Long-Range Program in its Basic Premises and then appropriately in each of its documents.

[Question] Please indicate at least one segment in which those changes should be made?

[Answer] The Law on Prices, even though it did not say all there was to say in connection with self-management social control of prices in relations among organizations of associated labor, and then also the Law on Planning, which is now in preparation--in my opinion not exactly the best solution and not placed on an adequate foundation of self-management--could have a large influence on development of the political system as well. However, the fact is often overlooked that construction of the political system does not begin in the organizations of assemblies and delegations, but above all with the relevant changes of production relations, in the position of workers in associated labor, so that the worker truly takes control of social capital and the resources for social reproduction, so that that happens even under the conditions of the contradictoriness of commodity production, which is pressing him down or whether he is held in the position of a hired worker by bureaucratic and technocratic decisions, regardless.

## Illusions Are Not Needed

The construction of the political system depends upon how much direct democracy is realized at the base of society. This means that no one in the name of the workers of the OOUR and without its control, neither the professional managers nor the bodies of the League of Communists or certain government agencies shall make decisions on income, on the conditions and results of his work. Those matters are to be decided by the worker himself directly or through his delegates and delegations in workers' councils or delegate assemblies, and income would be specifically dealt with in chambers of associated labor. All the changes in the political system should essentially follow from those foundations and criteria, since that is the essence of our system, and it is in this respect that it differs from the capitalist system and from the countries of real socialism. I am convinced that only on such foundations and such criteria is it possible to arrive at common ground in evaluating the operation of the various parts of our sociopolitical system and the changes needed in it.

[Question] It is obvious that the commission had a very difficult and complicated job. There were also compromises. How do you see implementation of the Program in the future?

[Answer] When the basic premises were adopted 3 years ago and especially when the Program as a whole was adopted, we agreed that the participants in the work of the commission would assume an obligation to begin to carry out the decisions of the Program in their own domain and area of responsibility. Yet this was partially realized both in the individual domains of the life and work of society and also within the republics and provinces.

If we truly want to use the Program as a strong means of achieving our own community and unity, then we should abide by what we agreed on in adopting it. To be sure, no one is asking that we depart from the Program and its propositions. However, the problem is that over many issues references are made to it, in the approach to carrying it out there are departures from what was agreed on in one direction or another, and that necessarily leads to disagreements. I pointed out some departures of that kind at the beginning of our conversation.

This has also occurred in connection with the approach to the work on the Law on Prices, on the foundations of social planning, concerning amendments to the Law on Foreign Exchange Transactions and the Law on Gross Income and Income. That is why there was a delay. Much the same took place with the Agreement on the Self-Management Bases and Scales for Realization and Distribution of Income, and I will not repeat the problems related to the credit and banking system as to the creation of "own" working capital of organizations of associated labor.

[Question] The commission has done quite a bit of work, and certainly you as well as its chairman. At this point, when you see how the Program is being carried out, are you disappointed?

[Answer] I did not have any illusion at all, since I know our Yugoslavia quite well. One should not lose sight of the fact that we had to adopt the Economic Stabilization Program because all self-managing and sociopolitical communities, all entities in our country, which have widely differing levels of development, wanted to achieve as much as possible in the shortest possible time in the development of the productive forces, in creating new jobs and in improving the living conditions in their own communities. We went too fast, faster than we were capable of. In my opinion it would be an illusion to expect that something essential would change in everything that has brought this situation about at the time when the Long-Range Economic Stabilization Program was adopted, that the subjective factor would behave in a way that was basically different. I certainly did anticipate greater results in spite of everything, more systematic and better-organized effort and a greater endeavor to mobilize our own forces. In line, of course, with the gravity of our situation and the existing possibilities offered to us by the system of self-management, our significant comparative advantages and the Long-Range Economic Stabilization Program.

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YUGOSLAVIA

REPUBLIC BREAKDOWN ON 1984 IMPORTS FROM CONVERTIBLE CURRENCY AREA

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 5 Feb 85 p 3

[Article by Milorad Urosevic]

[Text] Much has already been said and written to the effect that investments in past years have been one of the principal causes of the crisis which not only the economy, but indeed the entire society, has fallen into. We tend to forget the one-sidedness of this kind of thinking, above all the fact that the mistake did not lie in the sizable investments, which, assuming they were optimal and scientifically based, would not in and of themselves have been a bad thing or a limitation. In other words, if all those investments had followed upon detailed assessments and if they had been carried out within the periods of time projected, approximately 1 million people in the country would not be unemployed, but would be exercising their constitutional right to work, they would be producing and would be creating income that would be satisfying growing needs in the country and augmenting exports, which is an imperative of every society, including this one.

And once it was stated that investments were the principal "culprit" for all the troubles, people went to the other extreme. They issue assurances that the desired aim can be achieved merely by reducing investments, especially by reducing imports, even of the most indispensable equipment and up-to-date technology, which is like cutting off "the branch you are sitting on."

Without entering into further theoretical considerations of this issue, it is worthwhile to point to the accessible data concerning last year's imports from the convertible area by basic economic purposes.

The contents of Table 1 are clear and understandable to business people, so that there is no need to repeat in detail what is evident, but a few comparisons can be made up as a supplement to what isn't. In 1983 relations between imports for the purposes indicated were essentially different, although the differences in percentages may seem negligible. Total imports from this area in 1984 rose nine-tenths: 98 percent for production supplies, 69 percent for consumer goods and 62 percent for capital goods, which only confirms the observations in the introduction about the appreciable lag of investments. There was also an appreciable change in the proportional breakdown of the republics and provinces with respect to the pattern of imports with respect to

purposes. The share of Croatia in imports of production supplies rose about 2 percent over the previous year, which was also the case of Vojvodina, and that of Macedonia rose less than half of a percentage point. Serbia proper showed the largest drop of 3 percent, Slovenia a drop of 0.6 percent and Bosnia-Hercegovina and Kosovo a drop of slightly less than half a percentage point. The share of imports for investments in the country's total imports again rose more than 2 percent for Croatia, 2 percent for Bosnia-Hercegovina and a bit less for Montenegro. Slovenia and Serbia proper, which then were followed by the Federation and Vojvodina, once again recorded the largest drop.

Imports From the Convertible Area in 1984 by Economic Purposes

Republic- Province	Breakdown:							
	Total Imports		Reproduction		Investments		General Consumption	
	Millions of Di- nars	%						
SFRY	973,268	100.0	772,373	100.0	145,676	100.0	55,219	100.0
Bosnia- Hercego- vina	118,924	12.2	93,606	12.1	20,485	14.1	4,833	8.7
Montenegro	19,501	2.0	12,369	1.6	6,676	4.6	456	0.8
Croatia	225,983	23.2	181,867	23.6	30,519	20.9	13,597	24.6
Macedonia	58,754	6.0	48,397	6.3	7,100	4.9	3,256	5.9
Slovenia	192,191	19.8	154,764	20.0	25,414	17.4	12,013	21.8
Serbia proper	199,595	20.5	156,351	20.2	28,632	19.7	14,612	26.5
Kosovo	19,396	2.0	12,948	1.7	5,124	3.5	1,324	2.4
Vojvodina	95,925	9.9	85,009	11.0	7,050	4.8	3,866	7.0
The Feder- ation	42,999	4.4	27,061	3.5	14,676	10.1	1,262	2.3

Another understandable comparison can serve to show the extent of reduction of investments, at least as far as this source is concerned. Dr Branko Colanovic, the well-known economist, has written these past several days that investments per new job in 1982 and 1983 reached 730,000 dinars in 1972 prices, which, when the well-known rate of inflation is taken into account, climbs up to 5.54 million dinars. This means that the 145.6 billion dinars of imports indicated for investments, of which only 96 billion were for equipment, while the rest were for parts for current maintenance and major repairs and overhauls, allow for equipping only 17,335 work stations, which in turn, when compared to the 912,000 people awaiting employment at the end of 1983, makes it possible for barely 2 Yugoslavs out of every 100 awaiting to exercise their constitutional right to work be "warmed by the sun."

These averages are, of course, all at the level of the entire country, and they can serve as useful indicators for further research, for establishing the causes and for finding ways of eliminating undesirable consequences. It would be useful if these figures were presented at least for the principal sectors

of the economy and non-economic activities and labor force that, except for the republics and provinces,

The extent to which the Yugoslav economy is dependent upon imports of production supplies, and particularly the production of capital equipment, is certainly disturbing.

Thus in 1984 79.3 percent of all imports from socialist countries went for production, while the figure is 70.4 percent for the socialist investments, dropped from 77.5 percent in 1981 to only 70.3 percent last year, while the share of consumer goods dropped from 20.7 to 19.6 percent. The pattern with respect to purposes within the republics and provinces is evident. However, these comparisons show the digits by which the republics and provinces differ in level of development: according to data of the Central Bank, it is possible for 14 out of every 100 unemployed workers in Vojvodina and Banat, in Serbia proper 1.2 percent, in Vojvodina 1 percent and in Serbia proper 0.8 percent.

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YUGOSLAVIA

COKING COAL, OIL, OIL PRODUCTS IMPORTS IN 1984

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 6 Feb 85 p 10

[Article by Milorad Urosevic]

[Text] Everything that has been happening with purchases of raw fuels, especially petroleum, in this time of crisis when shortages of every kind are pressing on all sides, including the supply of domestic consumers, has been arousing great interest, but also discomfort. This is understandable when we realize that in this branch of the economy, as well as certain others indirectly related to it, a highly unusual automatism has been introduced. To be sure, this is not the only case of automatism, but it presupposes a strict monitoring of the behavior of the person for whom that method of economic activity has been defined, which in the case of the Yugoslav refineries has neither been established nor enforced. That is why increasingly frequent criticisms and objections are coming from sociopolitical communities which do not have "their own" refineries concerning the method of supply, or, put better, nonsupply, even though, respecting the law in effect, they have been setting aside foreign exchange for the purchase of raw fuels, which often the refineries are not doing, but rather they are being allowed to export gasoline without setting aside foreign exchange to import petroleum.

There is no need to dwell further on these observations, but we still cannot neglect an illogicality which has persisted rather stubbornly: the different disposition of foreign exchange realized on the convertible market and the bilateral payments market, which is especially evident as far as imports of these raw materials are concerned. Since most of these imports come precisely from the bilateral payments area, a fact that is not spoken and written about sufficiently, the purpose of this survey is to shed light on the "other side of the coin."

Table I has been expanded and completed to some extent as compared to previous surveys of imports of these raw materials, which certainly will arouse quite broad interest. First of all, a comparison: last year \$2.783 billion were spent for coking coal, petroleum and petroleum products, which means \$27.10 out of every \$100 of exports of the Yugoslav economy and \$23.10 of every \$100 of imports. Imports from the bilateral payments area, whose value was \$1.19 billion, cost \$18.00 out of every \$100 of exports and \$15.25 out of every \$100 of imports. The payment for imports from the bilateral payments area was

\$1.593 billion, which amounts to \$43.30 out of every \$100 of exports and \$33.75 out of every \$100 of imports.

Table 1. Imports of Raw Fuels in 1984

Indicator	Total	Breakdown		
		Coking Coal	Petroleum	Petroleum Products
<b>I. Total imports</b>				
Quantity, thousands of tons	14,389	3,255	9,676	1,458
Value, millions of dinars	347,303	25,389	280,734	41,180
Value, millions of dollars	2,783	203	2,250	330
Average price, dinars/kg	--	7.80	29.00	28.25
Pattern on basis of quantity, %	100.0	22.70	67.20	10.10
Pattern on basis of value, %	100.0	7.31	80.83	11.86
<b>II. From convertible area</b>				
Quantity, thousands of tons	5,715	951	3,836	928
Value, millions of dinars	148,451	8,300	113,111	27,040
Value, millions of dollars	1,190	67	906	217
Average price, dinars/kg	--	8.73	29.50	29.14
Share in total quantity, %	39.7	29.20	39.60	63.60
Share in total value, %	42.7	32.70	40.30	65.70
<b>III. From bilateral payments area</b>				
Quantity, thousands of tons	8,674	2,304	5,840	530
Value, millions of dinars	198,852	17,089	167,623	14,140
Value, millions of dollars	1,593	137	1,343	113
Average price, dinars/kg	--	7.42	28.70	26.68
Share in total quantity, %	60.3	70.80	60.40	36.40
Share in total value, %	57.3	67.30	59.70	34.30

The overall average price for coking coal is 7.80 dinars per kilogram, that of petroleum 29.00 dinars and that of petroleum products 28.25 dinars. The prices from the convertible area were 8.73 dinars for coal, 29.50 for petroleum and 29.14 dinars for petroleum products, while coal from the East cost 7.42 dinars per kilogram, petroleum 28.70 and petroleum products 26.68 dinars, while the share in the quantities imported was the other way about. The share of coal from the convertible area was 29.2 percent of the total, that from the bilateral payments area 70.0 percent; the respective figures for petroleum were 39.6 and 60.4 percent, and only in the case of petroleum products was more purchased on the convertible area (63.6 percent) than in the bilateral payments area (36.4 percent).

Judging by this relationship in the share of imports from the two currency areas, one might conclude that those republics and provinces which have a

trade surplus with the bilateral payments area would be in a more favorable position, that in the distribution of the debt for importing raw fuels they largely make the purchases, and would accordingly bear the burden of the payments for purchases from the bilateral payments area, but the situation is actually the other way around, [as shown by] the figures in Table 2.

Table 2. Distribution of Imported Raw Fuels in 1984

Republic-Province	Share of Exports in Imports in Trade With Area, %		Share in Distribution of Raw Fuels From Area, %	
	Convertible	Bilateral Payment	Convertible	Bilateral Payment
Bosnia-Hercegovina	96.4	81.2	34.0	66.0
Montenegro	68.2	191.5	74.0	26.0
Croatia	80.1	93.4	42.0	58.0
Macedonia	69.6	51.4	32.0	68.0
Slovenia	107.7	90.3	55.0	45.0
Serbia proper	92.5	136.1	60.0	40.0
Kosovo	56.1	196.6	2.8	97.2
Vojvodina	72.3	40.5	40.0	60.0

If we look at this table in a bit more detail, we will find confirmation of the title of this article: to the effect that petroleum is not only muddying our streams, but also relations, which presumably will be corrected after the evaluation of the Constitutional Court of Yugoslavia to the effect that a major portion of the foreign exchange law is contrary to the SFRY Constitution in that foreign exchange from the convertible market belongs to the "final exporters," while that realized in trade with the bilateral payments area is still divided up by the "state," on the principle of might makes right, or, it makes no difference, put just a bit more mildly: on the basis of acquired rights. Were that not the case, it could not have happened that Bosnia-Hercegovina has a ratio of exports to imports of 96.4 percent with the convertible area, is expected to pay only one-third of the raw fuels it is entitled to, while Montenegro, whose exports to the bilateral payments area are nearly twice as great as its imports, pays for three-fourths of these raw materials on the convertible market. Or, take Serbia proper, whose exports to the bilateral payments area represents 136.1 percent of its imports from that area, which means a surplus of 32 billion dinars, obtains only two-fifths of its raw fuels from that area and three-fifths pays for on the convertible area, while Vojvodina is in completely the opposite situation, a situation that is privileged, since it receives three-fifths from the bilateral payments area, where its exports represent only 40 percent of its imports, and pays for two-fifths of the raw fuels in the West, where it has 72.30 dinars of exports for every 100 dinars of imports. And Macedonia is in a still more privileged position, which certainly is not tending to bring about "peace in the house," but is giving rise to new disagreements and dissatisfaction.

The truth is that certain of the sociopolitical communities are having considerable difficulties in repaying debts abroad, while in large part this originates precisely in the debt incurred to build refineries which objectively can

every year refine twice as much as society needs. Nor is there any question of the need for solidarity, regardless of all the circumstances, but more is being given here by those who are "completely innocent" and less by those who "went overboard" in undertaking that construction--which is certainly something one cannot understand.

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